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ABSTRACT

In this bibliography on education in India, 192 publications are cited and annotated. The majority of the publications are research studies reported in Indian journals from July through September of 1969. The largest categories are administration and organization, educational psychology, student examination and evaluation, and educational policy and planning. A special section on teacher education is included. (JH)

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INDIAN EDUCATIONAL MATERIAL
Vol 4 No 3 September 1969

ACADEMIC ACHIEVEMENT

300 **BHATNAGAR R P:** Personality and other factors in scholastic performance - a review. Educational Trends 1969, 4(1), 7-13. 22 ref.

Presents a review of the literature on the role of various factors contributing to academic achievement. It has been concluded that the general belief of the teacher that intelligence and past achievement alone determine the amount of academic achievement of students is not correct. A number of non-intellectual factors such as 1) age; 2) teaching and learning methods and study habits; 3) biographical data and socio-economic status; and 4) personality characteristics operate in academic situations and determine together how much a school boy or a girl can achieve. It is important, therefore to take into consideration all these factors whenever a problem of academic prediction, academic evaluation or promotion of academic achievement is faced with by the school teachers.

301 **MAJUMDAR P K:** On aptitude testing - interaction and changes in group testing. Indian Journal of Experimental Psychology 1969, 3(2), 59-64. 16 ref.

Ninety students of a residential school were divided into 3 groups on the basis of their scholastic aptitude test scores: the low-achievers (L), the middle-achievers (M) and the high achievers (H). Each of these groups was further subdivided to 3 matched sub-groups L1, L2, L3; M1, M2, M3; H1, H2, H3 respectively. Retesting was done in 6 different groups: 1) L1 alone; 2) M1 alone; 3) H1 alone; 4) L2 and M2; 5) L3 and H3; 6) M3 and H2. Friedman two-way analysis of variance with the sub-groups of the low-achievers under 3 different conditions of testing i.e. L1 alone, L2 with M2 and L3 with M3 showed Xr^2 significant at .01 level. For other groups i.e. middle and high-achievers, no significant change of rank values after retesting was noticed. Further, it has been observed that greater the divergence between the groups, the greater is the group influence on members of either group. It has been noted that the less gifted children produced better results when they are tested in their own group.

302 MEHTA P: Achievement motive in high school boys (In Mehta P. Achievement motive in high school boys, Delhi, National Council of Educational Research and Training, 1969. 1-152).

The survey was undertaken with the following objectives: 1) to determine the level of achievement motive in high school boys; 2) to study the relationship of the achievement motive with school performance. Nine hundred and seventyfive boys of IX class were selected from 32 Delhi schools. The schools were selected on the basis of their socio-economic and achievement status (SES and AS). The boys were administered a thematic apperceptive measure, the Achievement Motivation Inventory (AMI) - a second instrument developed for obtaining data on achievement motivation, a verbal group test of intelligence (Mehta, 1962) and a socio-economic status scale (Kuppuswamy, 1962). A random sample of 200 boys were interviewed with the help of an interview schedule developed to study the pupil's scheme of the expectations of father, teachers and peers for his success in school. The following results were obtained: 1 The n Achievement (n Ach) level in Delhi school boys seemed to compare well with that found in certain studies with German and US boys. 2. The rural and urban boys showed no difference in n Ach levels. The boys studying in low SES and low AS schools showed an n Ach level equal to that shown by boys of high SES and AS schools, and higher than the level shown by boys of middle SES and AS schools. The composite SES and the father's income showed no difference in the n Ach levels. 3. The n Ach level showed positive correlation with the performance at the school annual examination. The high SES boys showed no relationship between n Ach and school performance whereas the low SES boys showed a positive relationship. The low SES and high SES boys showed no difference in their school performance as such. Both showed a higher level of school performance than that shown by boys in schools with middle SES. It appears that the need for achievement tended to show positive relationship with the school performance under certain conditions and no relationship under others. 4. The hypothesis that boys with high n Ach show perception of high expectations from them by fathers, teachers and peers was rejected. The self-expectancy of school success showed positive correlation with actual success in the annual examination. 5. The AMI was found to provide two distinct measures - one on an achievement related motive similar to the motive to avoid failure and the other on achievement-related values. The two showed negative correlation with each other. It is suggested that further research is needed on several questions raised by the results of the survey.

11

303 **MEHTA P:** Experimenting with motivation training for educational growth (In Mehta P. Achievement motive in high school boys. Delhi, National Council of Educational Research and Training, 1969. 155-202).

The study was undertaken to test the effects of the classroom programmes designed to enhance concern for achievement and to boost aspirations which were carried out by teachers who were trained earlier for this purpose. 5 schools (E2, E3, E4, E5, E6) were used as experimental schools and 2 were retained as control schools. Total number of boys involved was 290. Boys in E2 received training in achievement motivation from their teachers. The boys in E5 and E6 received a programme designed to boost their expectations. Boys in E3 and E4 received both the trainings. The students were given a pre-test consisting of a test of insight (TAT type pictures), a verbal group test of intelligence and semi-standardised achievement tests in chemistry, mathematics and physics. The post-test consisted of the test of insight and the achievement tests in the same subjects. The subsequent annual examination results were utilised as the second post-test for the purpose of analyses. The important findings of the study are that: 1) the teachers' level of achievement motivation can be raised by suitable training and that the teachers find this training very useful; 2) the students under these teachers seem to improve their performance. However the second finding is not conclusive and the study, it is suggested, should be replicated.

304 **SINGHAL S:** Environmental variants and intellectual performance of young children. Indian Journal of Applied Psychology 1969,6(2), 74-81. 23 ref.

Two hundred and seventy six children were selected by systematic sampling method and split into 3 groups (high, middle, low) once on the basis of parents' education and again on the basis of socio-economic status. A test battery of general ability consisting of picture completion, reversed similarities, similar opposities and classification was administered. The results showed that differences in socio-economic and educational levels of parents are likely to result in differences in the intellectual performance of children. Differences were significant between the performances of children of low socio-economic status and middle socio-economic status. However, there was no significanct difference between the performances of children of middle and high socio-economic status. Differences in the educational background of parents contributed to differences in the performance of children at all the three levels.

305 SRIVASTAVA D N, AGARWAL M C: Smoking in relation to academic attainment. Indian Journal of Applied Psychology 1969, 6(2), 51-4. 8 ref.

Two hundred and seventy male students (120 Intermediate and 150 M.A. students) were given a short interview schedule to complete. Items included on the schedule were introductory information, examination results, number of cigarettes smoked per day, etc. The subjects were divided into 3 groups: a) heavy smokers, b) light smokers and c) nonsmokers. Each group consisted of 40 Intermediate students and 50 M.A. students. The study revealed the following: 1) heavy smokers from Intermediate classes received poor average grade points (AGPs); 2) light smokers received better AGPs than heavy smokers and nonsmokers received better AGPs than light smokers and heavy smokers; 3) heavy smokers achieved poor AGPs mainly because of their truancy habits and not because of smoking; 4) at the post-graduate level, heavy smokers received better AGPs than light smokers and non-smokers. Smoking appears to help these students to reduce tension, relax in social situations and concentrate on academic work.

306 TANDAN R K, SHANKHDHAR S C, SATISH CHANDRA: Comparative study of the self concepts of high and low achievers. Educational Trends 1969, 4(1), 1-6. 19 ref.

Attempts to test the following hypotheses: 1) the more integrated a self-concept, the higher will be the achievements; 2) the less integrated a self concept, the lower will be the achievements; 3) significant differences exist between high and low achievers. Samoohik Mansik Yogyata Parikcha 4/51, a verbal group test of intelligence constructed and standardized by Dr. Jalota and a self-concept inventory, Swatva Sambodh Soochi developed by the NCERT, have been administered to 440 students (boys and girls) of VII and VIII classes. Only real and self-concept inventories were used. Scoring of self-concept inventories was made on a three point scale, and scoring of intelligence test was done by using the prescribed scoring keys by the author. For identification of high and low achievers the percentage of examination marks of students were converted into standard scores and were combined with intelligence scores. Top 27% of cases were identified as high achievers and bottom 27% of cases as low achievers. The following are the findings: 1) generally, the high achievers obtained higher scores both on real and ideal selves in comparison to low achievers; 2) only little differences exist between the self-concept of high and low achievers; 3) no discrepancies between real and ideal selves are visible in the case of low achievers. On the other hand high achievers of VII class girls show some discrepancy between their real and ideal selves. Besides these two groups, other groups of high and low achievers do not show much discrepancies in their real and ideal selves. The first hypothesis has been partially proved.

ADMINISTRATION AND ORGANIZATION

307 BHANDARKAR S S: University bodies and their role. Publishers' Monthly 1969, 11(8), 5-11.

Reorganization of the present university bodies has been recommended to deal speedily and in a business-like manner with the problems that now confront universities. The court or senate and the executive council could be merged together to form a smaller body which may be called the board of governors. Its membership could be about 25 and include 15 academics and 10 prominent persons including a couple of MLAs. The vice-chancellor should be given more powers as the board of governors would not be able to meet more than once in three months. A finance and establishment committee consisting of the vice-chancellor and five or six members of the board of governors would advise the board on all matters dealing with the various items of expenditure, sanctioning the budget, re-allocation of funds from one head to another, periodical promotions, payment of allowances, etc. Similarly the faculties could be abolished as the academic matters would be looked after more smoothly and efficiently by the boards of studies and the academic council. The academic council should be composed entirely of academic people and should be responsible for determining the contents of the courses of studies and the standards of the examinations. Thus the number of university bodies would be reduced from 5 to 3 and much money, time and energy would also be saved.

308 CHAUDHARI U S: 'School complex' - a new concept. Educational India 1969, 36(2), 50-51, 52.

The two main objectives of introducing the concept of school complex are: 1) to break the isolation of schools; and 2) to build up a cooperative commonwealth of neighbourhood schools to share and exchange ideas and facilities. Improvement of teaching of science and languages should be the first task of every school complex.

309 deSOUZA A: Academic freedom - freedom in an environment of security. Social Action 1969, 19(3), 236-46. 15 ref.

The following obstacles to academic freedom are mentioned: 1) the teacher's family and social commitments; 2) lack of opportunity for him to participate in the educational decisions; 3) the hierarchical set up of the department where free exchange of ideas is absent. The need for a professional organization (similar to American Association of university professors) to promote intellectual freedom is stressed. The dilemmas involved in the actual functioning of academic freedom are discussed and it is suggested that educational institutions should have written personnel policies, clearly enunciating the rights and obligations. Such policies, concerned as they are with personal and professional development of the faculty member, must eliminate sources of insecurity, confusion and conflict. The following guidelines are given to administrators of colleges: 1) the faculty should be given clear assurance of the institutional support in their professional activities; 2) the administration should encourage faculty criticism of the policies and actions of administrative officers; 3) the faculty members should be encouraged to participate in the discussion of important public issues; 4) the faculty members should be reminded, that while civil liberty qualifies them to speak on any controversial issue, academic freedom operates only within the field of their professional competence. The administration should take a broad view in adjudging the action of any faculty member; 5) the pressures from the public, board of governors or the alumni should be resisted in order to protect academic freedom; 6) a healthy intellectual climate should be encouraged within the various departments.

310 GADGIL A V: Changes in school managements. Maharashtra Educational Journal 1969, 17(11), 293-5.

Any reform in school management should start with the appointment of the right type of headmaster. Because of his key position as a link between the management of the school and the school, the headmaster should be well qualified and trained in administration and management. In all schools which are not reckoned as good, the government should appoint headmasters from the waiting list prepared by the State Public Service Commission. The headmaster would follow all provisions of the secondary schools code and work independently but in cooperation with the management as far as finances are concerned. He would be held responsible for any lapses in the school.

311 GAJENDRAGADKAR P B: Concept of university autonomy. Amrita Bazar Patrika 26 August 1969, p.6, Cols. 4-6. 900 words.

The important facets of the university autonomy are: 1) absence of restraint, interference or constraints from political power; 2) recognition by executive organs of the university administration of the need for full freedom to the faculties in their respective spheres; 3) full freedom of discussion to all faculty members in all matters pertaining to the faculties and absence of bossism; 4) freedom from fear of public opinion in respect of expression of views and opinions by the academicians; 5) cooperation between the students and the teachers in academic and non-academic matters.

312 _ GOSWAMI H: Svāyatta vidyālay (= Autonomous school) ∠ Hindi_/. Naya Shikshak (Teacher Today) 1969, 11(4), 72-7.

The functions of the Directorate of Public Instruction, School Inspectorate, and the Secondary Examination Board have been outlined. Though to some extent State control is inevitable in school administration, autonomy can be granted in some of the spheres of internal administration, such as admission, examination, promotion etc. Full autonomy in these spheres has been advocated for the smooth functioning of the school, as it will be inspiring and conducive to independent working and experimentation and will help in removing some of the deficiencies of existing examination system, reducing wastage and stagnation and in rightly judging merits of students. Autonomous school examinations should be recognised as equivalent to non-autonomous school examinations, so that students passing out from autonomous schools do not face any difficulty in getting admission in other schools. The relationship between autonomous schools and Secondary Examination Board has to be decided after proper deliberations taking all relevant factors into account.

313 JHA R N: Vice-chancellors' appointment - their tenure and age limit. Searchlight 13 July 1969, p.4, Cols. 4-6; p.5, Col.8.2000 words.

There is no uniform procedure for appointment of vice-chancellors. It varies from one state to another and also from university to university. The recommendations of the Radhakrishnan Commission (1948-49) and Kothari Commission (1964-66) regarding the method of appointment of vice-chancellors have been given. The following suggestions have been made: 1) the chancellor should appoint the vice-chancellor after consulting the university concerned; 2) the term of office of vice-chancellor should not be less than four years; 3) no retired person should be appointed as vice-chancellor.

314 JOHN V V: Choosing a vice-chancellor, looking for a leader or a scapegoat? Times of India 24 July 1969, p.8, Cols. 3-5, 7. 1750 words.

Two methods of choosing a vice-chancellor namely, election by the senate of the university or selection by a committee of persons not connected with the university, are discussed. It is suggested that the selection committee should study the campus and consult informally different sections of the faculty and students and even the public before making a choice. If such a careful study reveals that there is need for reorganization of the university, the government should be advised so. The myth of the prestigious position and unsuitable persons occupying the position are the reasons attributed for many of the ills connected with vice-chancellorship. It is suggested that young persons capable of preserving independence of action should be appointed as vice-chancellors and they should be able to return to teaching after their tenure of office.

315 JULKA G L: School complex [Theory and practice]. Progress of Education 1969, 44(2), 49-52. 7 ref.

The school complex as visualized by the Education Commission has been described. The advantages of the system of school complex are that it 1) promotes educational advancement at a low cost; 2) encourages cooperation among institutions of various levels; 3) encourages planning from the bottom; 4) provides better facilities and equipment to those schools which cannot afford them; 5) helps in providing freedom to educational institutions in various respects without any danger of its being misused; 6) helps to remove the weaknesses in teaching; 7) facilitates better supervision. The risks involved in introducing this system as viewed by B.G. Tiwari, in his article elsewhere have been summarized as follows: 1. Teachers working in higher institutions may not be able to provide guidance to lower institutions. 2. Constant contract with teachers of higher institutions might create inferiority complex in the minds of the teachers of the lower institutions. 3. Teachers' might normally devote all their attention to their own schools rather than to other schools. 4. The work load on teacher and students might increase, thereby affecting the efficiency.

316 **SHARMA R D:** Rajasthān meṁ pārī vyavasthā-mādhyamik evaṁ ucca mādhyamik vidyālayoṁ ki praśasanik samasyāem aur unka samādhān - ek anusandhānātmak adhyayan (1967-68) (= Shift system in Rajasthan - the problems of secondary and higher secondary_schools_and their solutions - an investigative study) /_ Hindi_/ Naya Shikshak (Teacher Today) 1969, 12(1), 61-79.

The heads of the institutions, supervisors, deputy supervisors etc. of Rajasthan were requested through a questionnaire to suggest solutions for the problems of the shift system. Major problems in the order of diminishing intensity are: 1) period of 40-minute duration; 2) seasonal changing of timing; 3) wear and tear and misplacement of furniture; 4) arrangement of co-curricularactivities; 5) keeping up personal relationship with teachers and students of the other shift; 6) paucity of extra class rooms; 7) cleaning of classrooms; 8) unequal opportunity to students for taking part in games; 9) supervision of class-teaching by head-master; 10) conducting of staff meeting; 11) completion of courses; 12) indiscipline in-between first and second shift; 13) inadequate library facilities; 14) dissatisfaction of students and teachers over shift system; 15) arranging a substitute for an absent teacher. Problems related to physical factors, though small in number rank higher than those of human factors. Government schools are facing more problems than the private schools. Both girls' and boys' schools are facing almost equal number of problems. Supervisors and headmasters are almost equally aware of the problems. Regarding solution of problems, supervisors offered better suggestions for five problems and headmasters for seventeen. Need for one gazetted officer of the rank of secondary school headmasters; extra allowance and power for headmasters; staff quarters within the school compound; hostels; more class rooms and personnel; playgrounds; adequate furniture and other accessories; fund for contingent expenditure, have been stressed for the improvement of the situation.

317 **SRINIVASACHARI G:** Equal educational opportunities. Hindu 1 August 1969, p.6, Cols. 6-3. 1050 words.

At the elementary stage inequality generally means quantity; at the secondary stage it implies diversity and at the university, quality. The Kothari Commission, while suggesting some measures to reduce inequalities, observed that perfect equality of educational opportunity is probably unattainable. The concept of equalization should be interpreted on the principle that education is the most effective tool which can minimise the exploitation of the weak and ensure social justice. Endeavour should be made to provide free and compulsory education to all children of the age group 6-14. The Kothari Commission's recommendation of the neighbourhood school system as a solution to the problem of educational inequality in the form of disparity in the educational standards of schools, is rather impracticable, and does not bear scrutiny. The reasons for the unfavourable attitude of the educated elite and the discerning section of the public towards the present-day secondary schools are: 1) formulation of educational policies mostly on the basis of the subjective opinion of a few, leading to sectoral prejudices; and 2) the un-accountable aversion to the introduction of work-experience. The following suggestions have been made: 1) starting job-oriented multi-purpose schools to prevent the swelling of the unemployed and the unemployables; 2) exposing good students to good influences so that with each succeeding generation of students there will be greater and greater improvement of standards; 3) conducting a systematic search for talent in the secondary schools and providing the poor among the talented with scholarships, books and stationery, free school meals, uniforms and a favourable environment for concentrated study; 4) continuous and conscious deepening of the content of education.

Student Participation

318 NAGAPPA S: Student evaluation of teaching. Educational India 1969, 36(1), 16-18.

The suggestion of the all-India conference of students' representatives held at Delhi in May 1969, to devise a proforma or questionnaire to elicit student response on the performance of teachers, though fraught with danger, cannot be dismissed as ill-conceived. However, in using it, care should be taken to see that 1) the emphasis is on built-in devices of self-correction and on the creation of conditions which would eliminate unhealthy rivalry; 2) the academic image of the teachers is preserved; 3) there is no polarization of forces i.e. teachers versus students; 4) the standard of education is maintained.

319 VENKATRAMIAH K: Participation in university affairs - a students' view. University News 1969, 7(7), 3-5.

It has been observed that student participation in academic bodies should be limited and in bodies of finance, organizational set-up and in bodies appointing teachers and examiners, student participation is undesirable. The following suggestions have been made: 1) forming student adhoc bodies whose views may be elicited for the purpose of syllabus and curriculum construction; 2) allowing student representation in a) bodies which look after the co-curricular activities of students, and b) committees for award of scholarships; 3) forming a consultative body of students and teachers to deal with matters affecting discipline in the campus; 4) forming a committee of students headed by the hostel warden to look after the hostel management; 5) permitting students in research institutes to participate in all affairs, both academic and non-academic in view of the maturity of students and of their prospective role as members of the academic bodies of the country.

ADULT EDUCATION

320 BHATT G P: Adult education in Gujarat. Indian Journal of Adult Education 1969, 30(9), 10-12.

Some of the approaches tried by Gujarat to eradicate illiteracy are: 1) individual approach; 2) selected area approach; 3) village approach; 4) socio-economic approach; 5) group approach; 6) mass approach. Of all these approaches the literacy drives i.e., group and the mass approach have been found most suitable. Besides these drives, regular classes had also been conducted for the last 18 years. The total number of persons made literate in the whole of Gujarat is about 8,22,000 and the total expenditure including establishment charges is about Rs.10 per adult made literate. A pilot project for the Fourth plan was started in which 3320 teachers and 235 workers took up literacy work without remuneration. The Gujarat State Social Education Committee, is in search of a method which can be helpful to new learners for self study. Many voluntary agencies like Gujarat Vidya Peeth, Ahmedabad, City Social Education Committee, Ahmedabad, Sarvodaya Ashram, Shamlaji have also been doing pioneering work in the field of adult education.

321 BHOLA H S: Correspondence courses for adult education. Education Quarterly 1968, 20(2), 35-7, 45.

An analysis of the socio-technological context of correspondence education has been made. A tabular model has been presented, to show how much of classroom interaction can be put into correspondence courses and what support can be provided by educational technology. However, it is observed that the present state of educational technology in the country is not very bright. The following areas of adult education have been discussed along with the possibilities of correspondence courses in these areas: 1. College education. Suitable portions of the content of courses should be programmed and radio facilities should be used in an integral way. 2. Middle and high school level education for neo-literates. The content of the courses should be programmed and handled by district-size bureaux. Instead of the state boards of high and higher secondary education, some kind of local responsibility may have to emerge. 3. Vocational and occupational education for para-engineering personnel, technicians etc. Since practical work and supervision are necessary, the right to offer education and certification should be judiciously decentralised. 4. Liberal education for the elite. 5. Farmers' and workers' education. Suitable curricula for correspondence course have to be developed.

322 DUTTA S C: Role of schools in the eradication of illiteracy. Education Quarterly 1968, 20(2), 30-1.

The following suggestions have been made to be adopted by the schools: 1) appointing in each school a staff member specially designated for adult literacy; 2) designing the curriculum of the primary and secondary schools in each community in a way as to suit the needs of children and adults in that community and to establish a link between the school and life in the community; 3) evolving a concept of education which does not separate elementary, secondary, higher secondary, university and adult education, but makes them part of a continuous and inter-related pattern of growth and change; 4) organising literacy classes for adults in the neighbourhood; 5) taking leading role in respect of provision of personnel and physical planning. It has been urged that the political leaders and educational administrators should take the lead in overhauling the educational system to convert all schools to community schools.

323 KOSHY T A: Problem of illiteracy in India. Education Quarterly 1968, 20(2), 11-14.

The following problems of illiteracy are discussed: 1) 22.2% of children of the age group 6-11 do not attent the school at all and they grow up as illiterates; 2) there is heavy drop-out in the first 5 years of schooling (67%); 3) 62.9% of the literate population are without any educational level; 4) the adult illiteracy will be reduced by about 25% only by 1981 almost entirely due to the expansion of primary education; the young illiterates of today will remain illiterates throughout their working life; 5) there is a greater concentration of illiteracy in the rural areas, among women and among scheduled tribes. Rapid quantitative expansion of primary school education and adult literacy programmes constitute the two-pronged effort at eradication of illiteracy. Apart from the effort of government agencies, there are a number of non-governmental agencies in adult literacy work. 'Gram Shikshan Mohim' of Maharashtra state - the effort to make an entire village literate in about an year or two has been specially commended. However, in view of the correlation between literacy and economic development, a third approach called the 'selective approach' aimed at providing functional literacy to the motivated farmers, industrial workers etc. would be preferable.

324 MAITRA S: Adult literacy - a case for voluntary movement. Education Quarterly 1968, 20(2), 23-5.

Discusses the role that voluntary agencies can play in the field of adult literacy. Voluntary organizations must acquire professional outlook towards their work. The dependence of these agencies on government help and assistance led to their loss of freedom of planning and action, whereas the final purpose of such help should be to engender self-impelled and self-sustained forces. The first task of these agencies should be to mobilise the youth for taking up the task of adult literacy. Given prior training, students can play an important role in literacy programmes as teachers, trainers and supervisors. Citizens in general can help to develop the movement against illiteracy. Gram Shikshan Mohim, the popular literacy campaign started in Maharashtra has been discussed in this context.

325 MAJUMDER H B: Vitalising literacy drive in the Gandhi centenary year. Indian Journal of Adult Education 1969, 30(7), 9-11, cover III.

The slow progress in the field of eradication of illiteracy has been attributed to the following factors: 1) lack of conviction on the part of the national leadership that eradication of illiteracy has a direct bearing on economic and social progress; 2) absence of a direct, systematic and planned attack on mass illiteracy; 3) failure in introducing universal primary education; 4) the methods and materials developed being unsuitable for adult literacy. The suggestions are: 1) launching a well planned movement for eradication of illiteracy; 2) drawing a realistic Master Plan with well defined targets of achievement; 3) both institutionalized and informal approaches should be followed by action programmes; 4) making it obligatory by legislation that each industrial unit and production centre should provide at least three hours of literacy instruction per week to its workers;

5) pooling all the available resources for a resolute drive for introducing universal primary education for children upto the age of fourteen. Eradication of adult illiteracy should be taken up on a voluntary basis and teachers and students should be involved in the task.

326 MEHTA M S: Development of adult education. Indian Journal of Adult Education 1969, 30(9),2-4, 13.

Apart from the need for enlightening the human spirit and broadening the mind of man, the concept of adult education has special value for India for three reasons: 1) country's commitment to a policy of planned and coordinated schemes of social and economic development in which active participation of people is of immense importance; 2) the new significance and urgency of the training of leadership arising out of the principle of self-government reaching down to the village with the advent of political independence and the adoption of a liberal democratic constitution; 3) the problem of mass illiteracy which retards economic progress; hence the need for functional literacy.

327 NAGAPPA T R: Preparation of reading cards for adult literacy instruction. Indian Journal of Adult Education 1969, 30(8), 7-8, 15.

The need for providing suitable follow-up reading materials for neo-literates has been stressed. The Third National Seminar on Literature for Neoliterates classified the literature for neoliterates into three grades i.e., 1) single card, folder, miscellany; 2) a miscellany, a connected narrative with a single focus; 3) focus on a single subject. The aims of all these three grades of literature are: 1) to provide scope for proficiency in writing; 2) to increase knowledge and 3) to provide recreation. The reading cards should contain topics of adult interest and the language should be simple and the words chosen, familiar and frequently used by the readers. Adequate illustrations of local background should be printed in double colours. The following grades of reading cards have been devised by Mysore State Adult Education Council for adults undergoing primary literacy course: 1) first stage reading cards for those who have completed the recognition of simple letters of the alphabets; 2) second stage reading cards for those who have completed the recognition of simple letters and vowel formations; 3) supplementary reading booklets for those who have completed the recognition of alphabets, vowel formations, conjuncts and aspirates. Two literacy workshops, one conducted in Mysore in

1967 and another at Basava Kalyan in 1968, to prepare reading cards etc. have been described.

328 SINGH T R: Pre-testing reading materials for neo-literates. Indian Journal of Adult Education 1969, 30(7), 7-8.

Pre-testing is employed to ascertain communication potential of some reading material for neo-literates. The following steps are suggested in pre-testing a reading material: 1. Selection of the reading material. The pre-test matter is selected from the reading material so that it is meaningful and representative of the whole reading material. 2. Preparation of pre-test instruments. Selected matter is worked out into word-count list and word meaning list. Multiple copies of the pre-test matter for readability test are made with provision for recording observations. Comprehension test is devised to elicit the communication potential of the material. Systematic and objective eligibility test is devised to select the sample of persons on whom the pre-test is to be conducted. 3. Drawing sample for pre-testing through random and quota sampling methods. 4. Establishing rapport with sample readers and administering the pre-test. 5. Analysis of the results. Information obtained may be organised in terms of what percentage of respondents have high, medium and low reading and comprehension abilities.

BASIC EDUCATION

329 MUKHERJEE L: Educational views of Mahatma Gandhi and their relevance today. Education 1969, 48(9), 5-10.

The main features of basic education as propounded by Gandhi have been discussed. The following modified programme of basic education has been recommended with a view to adopting the scheme in the changed situation. There is no need for having self-sufficient schools where the child's labour should support the education. Hence at the primary or junior basic stage instead of sticking to a single craft, a larger number may be introduced to give children better and wider chance of correlation with other subjects. Three periods for crafts and four for allied subjects may be provided and these may be taught by different teachers. At secondary level a two ladder system of terminal and preparatory secondary schools may be evolved so that overcrowding in higher educational institutions can be avoided. Part time schools of general education and of simple crafts which do not need either costly machinery or much labour may be provided for the terminal type. The students would be given wages for their labour but in a lumpsum at the end of the course, thus providing a capital incentive to start their own business instead of flooding the job market.

330 SEN K N: Mahatma Gandhi's ideas on education. Bulletin of the Ramakrishna Mission Institute of Culture 1969, 20(4), 99-104.

Gandhi's interest lay primarily in the field of elementary education. His scheme of Basic Education revealed his concern for solving the problems of mass illiteracy and mass poverty, and he gave low priority to higher education. He proposed that. 1) education should be compulsory and free for children of ages 7-14; 2) education was to be made independent of government aid; and 3) it should be self-supporting, being based on the training in some useful handicraft. He wanted that the whole scheme of education should evolve out of the practical training given in the basic craft instead of teaching the craft together with liberal education. At the age of 14, he wanted the children to reach the level of the then Matriculation standard minus English. The Basic National Education Committee (Zakir Husain Committee) appointed by the Wardha Conference to give practical shape to its resolutions drew up a syllabus of subjects for basic education, each with definite course objectives. However, the present scheme of 'Basic Education' has made important deviations from its prototype formulated at Wardha of which the most noteworthy has been the exclusion of the self-financing aspect of the Wardha scheme. Further Gandhi's thinking had left unsolved the question of integration of basic with higher education both general and technological. A revision of the curriculum of the senior basic schools or the whole basic school system may perhaps provide the answer.

COURSES OF STUDY (HIGHER EDUCATION)

331 AIRAN J W: Teaching of natural sciences. (In Shah A B. Modernization of university teaching, teaching of natural and social sciences in India. Bombay, Nachiketa Publications, 1969, 27-35.

The following aspects are stressed: 1. Encouraging study of natural sciences at the primary level. 2. Providing science education (at the college level) to all who desire a science degree to secure a lucrative job. 3. Providing science education in depth separately to those who are preparing for professional courses and for those preparing for a scientific career. Rigorous demands should be imposed for these groups of students. 4. Radical revision of undergraduate course and laboratory practice. The present deductive approach followed should be supplemented by an intensive inductive approach which will lead students to fabricate their own instruments and apparatus to satisfy their own curiosity. The work done in the laboratory should be related to the teaching of theory and the syllabus in laboratory work should be reduced. Laboratory work should be supervised by senior teachers. At the B.Sc. stage the laboratory exercises should be related to the actual research work done in the college or the university or based on research methods reported in reputed journals. 5. Making all post-graduate training research-oriented. 6. Better laboratory facilities for individual teachers.

332 ANAND D, KAPOOR I: Teaching of infectious diseases. Indian Journal of Medical Education 1969, 8(4), 187-91. 3 ref.

An evaluation has been made of the pattern of teaching of infectious diseases in the medical colleges in India through a questionnaire study. This included the hours spent on this subject, type of integration with other departments and institutions like infectious diseases hospital and also the nature of the assessment done at the end of the posting. The following recommendations are made: 1) recognising the teaching of infectious diseases to the undergraduates as a sub-speciality; 2) placing this sub-speciality in the curriculum of department of Social and Preventive Medicine; 3) providing this sub-speciality with resources for carrying out field investigation as and when there is an outbreak of an infectious disease; 4) setting up an isolation ward in every medical college under the responsibility of the department of Social and Preventive Medicine; 5) evaluation of the students for their understanding of communicable diseases by the Department of Social and Preventive Medicine.

333 BAZAZ-MALIK G: Note on the teaching of immunology to students of medicine. Indian Journal of Medical Education 1969, 8(3), 155-6. 4 ref.

Though immunology cannot be introduced at present as a separate subject in the undergraduate level, a limited amount of teaching of allergy and immunology with emphasis on present day trends is necessary. At the post-graduate level, however, it would be desirable to introduce post-graduate courses in immunology in some selected medical institutions. Alternatively, short intensive courses in the subject can be offered on a regular basis. The multidisciplinary nature of the subject demands interdepartmental participation in teaching of the subject. The subject should be taught only by those who are actively engaged in research in this subject. Universities and colleges where training in medical laboratory techniques is imparted, students should be encouraged to take up techniques in immunology as a special subject.

334 LINGAMURTY V: New approaches to civics. Educational India 1969, 35(11-12), 370-4.

The over-emphasis in the current syllabus of civics on the political aspect of citizenship ignoring the impact of the social and economic institutions on citizenship has been criticized. In teaching civics emphasis should be on the applied rather than the theoretical aspects of citizenship. Civics should be treated primarly as an empirical science which deals with the conflicting loyalties of a citizen to the political, social and economic organizations. The following topics along with the number of periods of study have been suggested for the proposed Intermediate course: 1) nature, scope and value of Civics(10 periods); 2) problems of citizenship (4 periods); 3) religion and language (6 periods); 4) duties and rights of citizens (8 periods); 5) law and the citizens (4 periods); 6) citizen and political institutions - the State and Government (40 periods); 7) democracy versus dictatorship (12 periods); 8) relations between the State and the citizen (12 periods); 9) the economic systems (10 periods); 10) social institutions (12 periods); 11) citizenship and national integration (12 periods); 12) towards world citizenship (10 periods).

335 MILLER F J W: Desirable developments in paediatric education. Indian Journal of Medical Education 1969, 8(5), 238-41. 3 ref.

Suggests some improvements in paediatric education which would be practicable with the existing staff and the present structure of the medical curriculum. A block period of three months for teaching the subject could be made available and a quarter of the total number of students, numbering 30-50, could be considered as a unit and the course could be planned to cover the available time. If teaching in child health comes in the fourth year, then the didactic lectures should also come in that year, and the material for the lectures should be related to the clinical teaching of the paediatric appointment. The basic concepts of child health should be introduced by: 1) explaining growth and its variation from conception to adolescence; 2) displaying to the student the common causes of death and illness in children in the locality in which the college operates; 3) demonstrating the signs/symptoms, diagnosis and methods of prevention of the diseases of children; 4) teaching practical and simple therapy of illness and the elements of child rearing within the local community; 5) training students in recognizing danger signs and indications for referral to hospital. Co-operation of other departments like obstetrics and preventibe and social medicine would be necessary for teaching certain aspects. (One possible design for a three-months course is set out in the Appendix) Paediatrics need not be a separate and independent paper for examination. However, paediatricians could be incorporated as internal examiners in the department of medicine (and obstetrics) and child patients could be used as examination cases. Similarly, two questions in child health, set and marked by paediatricians, could be incorporated in one of the papers in medicine.

336 NAYAR D P: Approach to medical education in India. Manpower Journal 1969, 4(4), 7-26.

It is pointed out that it would be unrealistic to think of a country-wide coverage by fully qualified doctors of modern medicine within a reasonable period of time. It is suggested that a plan for such a coverage must take into account the prevailing indigenous systems of medicine, in regard to which data should be collected at an early date. Even with regard to the modern medicine, it is advocated that a two-tier system ought to be thought of and the emphasis should be on large-scale production of the lower type qualified doctors who would be supervised by fully qualified doctors. Pending the formulation of such a plan, it is suggested that too much importance cannot be attached to the doctor-population ratio, on which has been dependent the planning of health personnel.

337 RAMALINGASWAMI V: Duration and content of pre-medical education. School Science 1969, 7(1), 31-5. 9 ref.

Pre-medical education in India at present is for one year after a student passes the Higher Secondary or the Pre-university Course. If accepted, the Education Commission's proposals would provide two years of continuous and integrated study of pre-medical sciences after 10 years of school and this should result in a better and a more closely integrated pre-medical education. The teaching of biology should mainly include basic concepts of the structure and function of living organisms, embryogenesis, evolution, comparative anatomy and physical anthropology, cytology, fertilization, growth development and ageing. The study of physics should include electrical phenomena, mechanics, hydrodynamics, thermodynamics, optics, nuclear physics, radioactivity and the nature and biological effects of ionising radiations. Chemistry is an experimental science and must be treated as such. Students must be encouraged to make observations on problems rather than observe set demonstrations. Physical and organic chemistry are the important branches to be taught for a proper appreciation of biological and pathological chemistry. Liberal education in humanities and behavioural sciences should also be initiated in the premedical period and it should continue throughout the medical course.

338 SEMINAR OF EXPERTS ON UNIVERSITY TEACHING FOR EDUCATIONAL PLANNING IN THE ASIAN REGION, NEW DELHI, 5-12 August, 1969. ∠ Recommendations_/. University News 1969, 7(9), 15-17.

The recommendations are: 1) introduction of university courses in educational planning for a) the personnel actually engaged in educational administration and planning, b) teachers under training, c) teacher-educators, d) post-graduate students in fields like education, economics, statistics, sociology, e) doctoral students in fields contributory to educational planning; 2) constituting the faculty which offers educational planning in such a way that personnel with necessary background in the contributory disciplines and educational planning are includedin it; 3) establishment, where feasible, of departments of educational planning in universities with concurrent appointment of academic personnel from contributing disciplines; 4) associating personnel from government agencies in the teaching of educational planning in the universities; 5) greater reliance on methods like the project method, the syndicate method, case studies etc. for the purpose of teaching; 6) giving precedence to institutional schemes and interdisciplinary projects involving members of the faculty, educational administrators and post-graduate students in undertaking research; 7) conducting orientation programmes for university teachers with regard to contents of course, methods of teaching and evaluation of student performance; 8) mutual cooperation between a) different faculties in the university, b) between universities, planning agencies in and outside the region; 9) action on the part of the Asian Institute on the following lines a) organizing orientation programmes for university teachers, b) providing assistance to member-States in organizing in-service training for personnel engaged in educational planning and administration, c) operating a documentation service, d) reviewing the progress of the teaching of educational planning periodically.

339 VARMA K C: Teaching of Pharmacognosy in India. Indian Journal of Pharmaceutical Education 1969, 3(2), 14-17.

It is suggested that there is an urgent need for revision of the Pharmacognosy courses, specially at the undergraduate level. The teaching, it is proposed, should be done according to either bio-chemical or physiological classification of drugs so that the subject becomes more coherent and interesting. In the practical classes, however, the work could be done according to the morphological classification. At the postgraduate level, it is advocated that the courses should be so organised that the student can acquire adequate fundamental knowledge about some of the recent developments. These courses, it is pointed out, could even be governed by the area of interest of the teachers themselves. The outline of the courses -undergraduate and postgraduate- to be adopted by the university of Saugar are given.

340 VENKATESWARLU D: Some observations on teaching design Chemical Age of India 1969, 20(7), 588-9.

It is pointed out that the majority of the project reports submitted by design students are not of much use. The following suggestions are given for improvement of the standards of teaching in design: 1. Modernisation of the contents of design courses. 2. Periodic training of faculty members in industry. 3. Cooperation of design engineers from industry for giving design courses in universities. 4. Assignment of small but specific design problems which should be worked out in full including mechanical details, shop drawings etc. according to standards and codes. 5. Proper works training of students in industries.

CURRICULUM

341 DEVPURA R C: K̲āryānubhav - punarvicār (= Work-experience - reconsideration) [Hindi]. Rajasthan Board Journal of Education 1969, 5(2), 57-61.

The programme of basic education, industrial education, social service, earn and learn, labour education etc. has met with little success, since students have a general tendency to shirk physical labour. To make the programme of work-experience successful teachers should get themselves involved in these projects first and set an example before the students, so that the students can emulate them.

342 DORAISWAMI S, GALUSHIN V M, MEYER G R: Main principles of the biology syllabus for the middle and senior high school. School Science 1969, 7(1), 26-30.

The main objectives of the biology course taught in the secondary schools (classes 6-11) of Delhi under the Secondary School Science Teaching Project undertaken by the NCERT in collaboration with a team of experts from the Unesco are: 1) to give a comprehensive and systematic knowledge of the world of living things and of man, on a scientific basis; 2) to discover the basic principles of modern biology. The syllabus for the middle stage stresses the relationships of biology to agriculture, human nutrition, health, medicine, problems of family planning and economy. The course on General Biology for senior high school stage is built on the basis of the following principles: 1) modern scientific ideas at the levels of biological organization of living substance - a) molecules and cells, b) the educational principle of gradual elaboration of the materials studied. Main topics of the course and the number of periods of study for each topic have been given in the appendix.

343 GUPTA S P: School improvement through curriculum development. Teacher Education 1969, 3(3), 12-14.

The suggestions are: 1) revision of curricula and courses to orientate education to national needs; 2) adoption of improved methods of teaching and evaluation; 3) undertaking book development programmes which include the following: a) production of text-books oriented to Indian conditions and the needs of the Indian students, b) further development of the programmes of text-book production by the National Council of Educational Research and Training; c) establishment of autonomous organizations for production of school text-books in the states; d) development of research in curriculum and text book production; e) preparation and publication of childrens' books with a view to promoting national integration; 4) supplying free text-books and stationery to poor children at the lower primary stage and building adequate textbook libraries to ensure access for every student to all the textbooks. Improvement of curriculum requires also the following: 1) creation of a feeling for the need for improving the curriculum; 2) a comprehensive organizational structure for curriculum improvement; 3) a general design of the curriculum; 4) proper resource materials for instruction; 5) a working principle for dealing with child and adolescent development and learning; 6) a comprehensive evaluation programme.

344 **KHASNAVIS P K**: Comparative analysis of social studies programs in the secondary schools of India and the United States. Social Studies Teacher 1969, 6(2), 13-15.

The following observations are made: 1. In the objectives of teaching social studies, both India and the United States emphasize human relationships, promotion of a secular democratic society, national and world citizenship and the understanding of other cultures. India stresses more on international goodwill while the United States emphasises on preservation American way of life. 2. In India, social studies generally includes hisotory, geography, civics and in some states also economics, sociology and current events. In the United States it regularly includes history, geography, civics, economics, sociology, anthropology and psychology. 3. In India social studies is dominated by memorization whereas in the United States, experiments in team teaching, large group instruction, individual projects, teaching machines and research programs are conducted. 4. There are not many curriculum guides in India and the recommendations of different commissions are not implemented rapidly. In the United States, there are curriculum guides for social studies in the local school districts and efforts are made to implement the recommendations of the committees. Some of the suggestions made for the improvement of social studies in the secondary schools of India are: 1) formulating the objectives with a view to improving unity among the states; 2) including history, geography, civics, sociology, anthropology and economics and some comprehensive social studies courses such as 'problems in Indian democracy' and 'world civilization'; 3) emphasizing the study of citizenship; 4) evaluation of students also on the basis of the day-to-day work by the teachers.

345 **LULLA B P**: Concept of social studies. Social Studies Teacher 1969, 6(2), 1-12. 9 ref.

The considerable divergence with regard to the concept of social studies and its syllabus organization in the country is pointed out. An attempt is made to clarify the concept of social studies on some logical framework based on the relationship of goals of the nation and the roles of educational systems or programmes of studies. Five types of educational programmes prevailing in different countries with different social orders have been pointed out. An integrated approach is advocated in teaching social studies in schools. The curriculum core, it is suggested, should consist of language studies, social studies, science studies, nature and art studies upto highschool stage before any specialization begins.. The main features of the concept of social studies have been listed as follows: 1) it is an interdisciplinary course; 2) it is placed in school curriculum to develop proper social attitudes, sensibilities and skills in future citizens; 3) its scope iscontinuously growing; 4) its approach in teaching is based on a pragmatic philosophy; 5) it covers the study of communities at all levels - local, regional, national and international with focus on man and his social environment; 6) its emphasis rests more on the contemporary human life; 7) its materials are useful as a media for general education at school level.

346 MEHTA J S: Comprehensive work experience programme. Naya Shikshak (Teacher Today) 1969, 11(4), 45-71.

The following objectives of work experience programme in education are mentioned: a) to help solve the problems of national development; b) to help build human resources; c) to help introduce to the world of work and employment; d) to help students to 'earn while learning'. It is also mentioned that the educational pattern in Rajasthan provides ample scope for work experience. 'Earn while you learn' project introduced in Rajasthan by the author when he was director of primary and secondary education is described elaborately.

347 VARMA S C: Agriculture education at secondary stage - its new dimensions [A few observations]. Progress of Education 1969, 44(2), 46-8.

It is pointed out that the following aspects have to be considered with regard to agricultural education in middle schools and high schools: 1) the class level at which it will be most suitable to introduce agriculture; 2) should the teaching prepare students for actual farming or should it be concerned with a general understanding and appreciation only; 3) how should it be related to the total curriculum; 4) how to keep the teachers acquainted with modern developments in agriculture; 5) what teaching materials, facilities and equipment are needed; 6) what relationship should be maintained with other agencies concerned with agricultural education. Instruction in agriculture and practical education in farming, closely related to local community problems and situations have been suggested to prepare young men for scientific farming. The syllabus should be flexible which can be developed around a series of concepts that are considered to be important in the secondary school programme of agricultural education. The concepts may be grouped under the major areas like crops and soils, livestock products, soil conservation and horticulture.

ECONOMICS OF EDUCATION

348 HALDAR S K: Public expenditure on education. Yojana 1969, 13(14), 20-1.

Expenditure on education shows some special characteristics. They are: 1. The benefits from the investment in education do not accrue immediately because of long gestation period. 2. Decisions once implemented in this field cannot be reversed without very grave costs. 3. The recurrent expenditure generated by the capital investment constitute a severe budgetary strain on the country's resources. 4. Many of the benefits of educational investment are vague and difficult to identify. The various factors involved in computing the costs of education and benefits accruing therefrom are discussed. It is pointed out that, in principle it is possible to divide the costs and returns, between their public and private components. For the public expenditure and returns, may be used the rate on public funds as the nearest approximation to the social time preference rate. The major part of the costs is likely to be public whereas the major part of the identifiable benefits is likely to be private. The benefit-cost relations are liable to distortion by the use of different discount functions to determine the present value of the costs and benefits. The chief drawbacks of this method of benefit-cost analysis as a guide to investment in education are that only the direct benefits can be quantified and the social or indirect benefits is subject to imputations. However, in the absence of any better alternative, the benefit-cost approach only can serve as a rough indicator. This is better than the imperatives of politics as a means of deciding the pattern of expenditure.

EDUCATION : GENERAL

349 DAVE V G: Tagore's concept of education. Naya Shikshak (Teacher Today) 1969, 11(4), 78-87.

The basic principles of Tagore's philosophy of education are: 1) harmony with nature; 2) harmony with human surroundings; 3) harmony in international relationships. According to Tagore, the following are the aims of education: 1) physical aim - healthy physical development of children. 2) intellectual aim -

the power of acquiring ideas through independent efforts and of critically appraising and assimilating them; cultivation of intellect in order to counter-balance emotional immaturity and instability; 3) moral and spiritual aim - making religion and morality an intimate part of life; 4) general aim - utilitarian and vocational education is necessary. The curriculum, as Tagore conceived it, must provide fulness of experience in terms of certain subjects as well as certain activities. The pupils should be made economically self-reliant. The method, he advocated, should be based as far as possible on real life situations as well as on the concrete facts of nature and social life. The process of education should be joyous and lively. Tagore was opposed to any form of rigid and harsh discipline. He believed that discipline should come from within. He advocated mothertongue as the medium of instruction and suggested residential educational institutions. Tagore stood for synthesis of ancient and modern culture.

350 DUBEY R S: Vidyārthī vidyālay ke kāryom meṁ rucī kaise leṁ ? (= How should students be made to take interest in school activities?) /-Hindi_7. Rajasthan Board Journal of Education 1969, 5(2), 51-6.

The meaning of interest has been explained and the physical, social and educational causes that hinder the desired development of interest in students have been highlighted. The interest of students in school activities can be roused by 1) making school work purposive in the eyes of students; 2) giving students freedom of physical and intellectual work; 3) utilising students' natural tendencies, such as curiosity, exploration, self-importance etc.. and 4) awarding prizes to motivate students to do their best.

351 KANUNGO S: Some thoughts on education. Bihar Information 1969, 17(13), 19-23, 32.

The prevalence of different types of educational systems, like public schools, basic schools, sainik schools, ashram schools has been criticized as it encourages class consciousness and students of basic and traditional schools, etc. are at disadvantage in the competetive examinations. Some of the other problems of the educational system which need consideration are: 1) multiplicity of schools and colleges resulting in low educational standards; 2) corruption in the university administration; 3) high cost of the text-books; 4) the language of instruction; 5) craze for foreign degrees; 6) students' school dress; 7) teachers' financial and social status. Some of the major suggestions are: 1) appointment of a University Service Commission by the U.G.C. which will be responsible for appointing all the teaching and administrative staff of the universities excepting the ministerial and menial staff; 2) vocationalizing secondary education; 3) appointment of a Standing Selection Committee in every State consisting of the Chief Justice of the State High Court, Chairman of the State Public Service Commission and three persons, not connected with any university of the State, to be elected by the members of all university senates for selection of vice-chancellors; 4) radical reform in the recruitment policy of the government by a) making secondary education as the minimum qualification for recruitment to all posts including all-India services and giving intensive training in the job concerned for 4 years; b) bringing the public undertakings and autonomous bodies under the purview of the Union Public Service Commission.

EDUCATIONAL PSYCHOLOGY

352 JOSHI J N: Index of industriousness. Journal of Psychological Researches 1969, 13(2), 71-3. 3 ref.

In this study efforts were made to set up the limits of significant industriousness, indolence and normal work habits precisely by studying the nature of frequency distribution of indices of industriousness. It was hypothesised that 1) indices of industriousness demonstrated the normality of distribution like other traits such as achievement, intelligence etc, and 2) there was likelihood of having industrious, normal and indolent group of students due to inequality in their A Qs and IQs or T scores in achievement and intelligence. The scores of 300 students (age group 14-16) were taken in achievement and intelligence. The raw scores were converted into T scores and the indices of industriousness were worked out by using the formula: index of industriousness = T score in achievement ÷ T Score in intelligence.

The indices of industriousness thus obtained were tested for normality. The results confirmed the first hypothesis. The following limits were derived: 1) industriousness would be exhibited by cases having their indices greater than or equal to 1.05 at .01; 2) similarly indolence, for cases with indices less than .99; and 3) normal group of students would have their indices between .99 and 1.05.

353 KAUL L: Study of personality adjustment of non-public school boys. Educational Trends 1969, 4(1), 32-5. 7 ref.

Attempts to explore the relationship among 5 areas of personality adjustment viz. home, school, health, emotional and social among non-public school boys, and to locate the area in which non-public school boys confront maximum number of adjustment problems. The sample consisted of 200 boys of 9th class (age range 12-16) from two government higher secondary schools, one in Ajmer City and the other in Pushkar, a rural area near Ajmer. The personality inventory, Vyaktitya Prakh Prashnavali, constructed and standardized by M.S.L. Saxena was used. The percentage of the boys falling in each grade of adjustment was calculated to find out the degree of adjustment problem. The intercorrelations between areas of adjustment were found out. The findings are: 1) the adjustment of non-public school boys on the whole is satisfactory; 2) these schools cause great deal of anxiety to many boys; 3) non-public school boys confront a number of emotional problems; 4) adjustment problems in the different areas are inter-related. Replication of the study with larger samples and a comparative study of the personality adjustment of public and non-public school boys have been suggested.

354 KRISHNAMURTHY S, SOUNDARARAJA RAO T R: Comparative investigation of the study habits of suburban and urban children in some high schools in Coimbatore. Journal of Educational Research and Extension 1969, 6(1), 32-9.

A special study-habit check list and a questionnaire were administered to 318 students. The analysis of scripts of 300 students (180 urban and 120 suburban) resulted in the following findings: 1) there is no significant difference between urban and suburban students in their study habit scores; 2) study habit scores of boys compare favourably with those of girls; 3) there is high correlation between maintaining a schedule of work and study habits in the case of urban girls and suburban boys; 4) there is highly significant correlation between study habits and external help in the case of urban students; 5) the economic status of families of students has significant correlation with the study habits whereas the educational background of families does not have any; 6) there is significant correlation between the study habits and academic achievement; 7) excessive playing and poor economic condition are hindrances to studies; 8) the high achieving group have the following study habits: a) discussion with friends and teachers; b) punctuality; c) spreading the work uniformly throughout the year; d) revision of answers in examinations. Certain recommendations in keeping with these findings have been made.

355 LINGAN N: Motivation development in schools. Tamil Nadu Education 1969, 3(3), 53-4.

The need for conducting research on the role of motivation in determining the students' learning capacity, memory, perception etc. has been stressed. Low motivation is considered as one of the significant factors contributing to the problem of low academic achievement in the educational institutions. The following suggestions have been made with regard to motivation development in schools: 1) developing goal setting behaviour in the children after conducting creative imagination test. a deep desire must be created in them to achieve this goal and they should also be helped to overcome the problems like lack of confidence, lack of finance, in achieving the set goal; 2) creation of proper classroom climate by the teachers through their own behaviour, skilfulness and tactics; 3) encouraging the pupils to form good learning habits like extra-reading and independent thinking to solve problems; 4) creating a right type of classroom interaction by allowing students to get their doubts clarified and express their views on different problems.

356 MALATESHA R N: Study of the relationship between n-achievement, n-affiliation, n-power and socio-economic status. Indian Journal of Experimental Psychology 1969, 3(2), 31-3. 3 ref.

Forty male graduates (of ages 20-40) undergoing teacher training in Karnatak University were administered 6 TAT type picture test. Each picture was projected for a minute and the subjects were asked to write stories about the pictures. Data on socio-economic status of parents were collected by means of a questionnaire. The stories were scored according to the method recommended by Atkinson (Atkinson J W: Motives in fantasy, action and society. Princeton, N.J. Van Nostrand Co.). Kuppuswamy's scale (Kuppuswamy B: Manual of socio-economic status scale (urban), Delhi, Manasayan) was used to calculate the socio-economic status (SES) of the subjects. Nineteen belonged to middle SES group and 21 to the lower SES group. No one belonged to the high SES group. n-achievement, n-affiliation and n-power scores were calculated and the means were compared. The results of the analysis showed that the scores obtained by the two SES groups did not differ from each other.

357 PANDE C G, KANEKAR S V: Item analysis of EPI with data on Indian sample. Indian Journal of Experimental Psychology 1969, 3(2), 54-8. 6 ref.

The need to reexamine Eysenck Personality Inventory (EPI) items for their power of discrimination was realised . Form A of EPI was administered to 370 graduate students of Nagpur University (204 males and 166 females of ages 20-30 years). The protocals were scored following the key given by Eysenck to obtain the extraversion (E), neuroticism (N) and lie (L) scores for each respondent. Protocals falling in the highest and lowest 27% of the distribution of these scores were taken out for item-wise comparison. Proportion of respondents in the high group (Ph) and low group (PI) endorsing answers in the keyed manner was found out. From the Ph and Pl, discrimination index was determined for each item following Harper's item analysis chart. Biserial coefficient of correlation for each item was read from the abac by J C Flanagan adapted by Guilford. The lie score was ignored. It was decided, arbitrarily, to retain those items which have a discrimination index of 18 and above and a biserial r of .28 and above. Thus exclusion of 2 items from the 'N' scale, 5 from the 'E' scale and 2 from the 'L' scale is suggested. The need to have more such item analysis with various Indian samples and the necessity to obtain more direct evidence of its validity as a measure of extraversion-neuroticism dimension are stressed.

358 PILLAI J K: Creative process. Teaching 1969, 42(1), 12-13. 5 ref.

The creative process is conditioned by two factors: 1) the start which occurs as an intuition or idea, a heightened sensitivity or an intense excitement which leads to a problem; 2) a period of hard work involving the disciplined application of learned skills and techniques. To promote creativity, it is suggested that teachers should provide opportunities for pupils in the following aspects: 1) formal training of the powers of observation, concentration and the inculcation of a respect for accuracy which would lead to inquiry, investigation, critical thinking, categorization, insight and understanding thus enabling the child in acquiring a considerable range of skills, habits and capacities; 2) promoting individual's motivation and the ability to submit to the disciplined application of acquired skills and techniques and a capacity for sustained hard work.

359 **RABINDRADAS L D**: Learning and personality rigidity. Indian Journal of Applied Psychology 1969, 6(2), 89-94. 13 ref.

It was hypothesised that there would be an overall difference among the high, moderate and low rigid individuals with regard to their efficiency in learning illogical material. Hundred and fifty students (age group 14) of X class belonging to 5 schools were the subjects. As friction in learning and conflict were considered essential in this study, students were asked to put aside already learnt (correct) material and learn new (incorrect) material. The Rigidity Picture Test (RPT) was made use of to assess the personality rigidity of the subjects. The subjects were classed into 3 groups on the basis of RPT scores: 1) high; 2) moderate and 3) low rigid groups. The Standard Progressive Matrices was used as a test of general intelligence. The results revealed that there was an overall significant difference among the high, moderate and low rigid groups in terms of total scores on the learning test. The high group was superior to the other two groups. It was confirmed that personality rigidity has bearing on learning efficiency.

360 **RABINDRADAS L D**: Perceptual stability among the rigid and non-rigid. Indian Journal of Experimental Psychology 1969, 3(2), 65-70. 21 ref.

Hundred and fifty two male students of X standard of age 14 years were administered the Muller-Lyer Illusion task to study their behaviour in terms of the point of subjective equality, the mean judgement scores of the ascending series, and of the descending series. Rigidity Picture Test (RPT) was used to classify the subjects according to the level of rigidity.Forty nine were high rigid; fifty nine were moderate rigid and forty four were low rigid. The following results were obtained: 1. A) the high, moderate and low rigid groups differ in the variability of the points of subjective equality in the Muller-Lyer situation; B) the high group is different from and less varient than the low group with respect to points of subjective equality. 2. A) in the ascending series overall significant difference exists in the variability of the judgement scores given by the 3 groups; B) the high group stands out distinctly different from and more consistent than the moderate and low groups; C) there was no overall difference in the variability of the judgement scores of the 3 groups in the descending series. Hence, perceptual stability appears to be influenced by high level of rigidity.

361 RAINA T N: Exploratory study of children's manifest anxiety scale (CMAS) on Indian children. Indian Journal of Experimental Psychology 1969, 3(2), 44-9. 19 ref.

It was aimed to study the Indian children's manifest anxiety as measured by CMAS and its relationship with intelligence and school achievements. A Hindi translation of CMAS was administered to 300 students of Vth grade. No sex differences were found with regard to anxiety and L scores; both the sexes made significantly higher scores on both the dimensions of the CMAS in comparison to that of the original authors of the CMAS (Castaneda et al). The relationship between intelligence and anxiety was negatively low but significant for both the sexes. No relationship was found to exist between anxiety and the L scores and between L scale and intelligence. The relationship between anxiety and achievement for both the sexes was negative and significant, but seemed to be little influenced by intelligence. The addition of anxiety scores to intelligence test scores, however, resulted in an improvement in the prediction of school achievement for both the sexes. The small number of the subjects was the limitation of the study.

362 SIDDIQI M M, SULTAN AKHTAR S: Quantitative study of n-achievement, n-affiliation and n-power among disciplined and indisciplined students. Journal of Psychological Researches 1969, 13(2), 66-9. 11 ref.

Twenty students - 10 disciplined and 10 indisciplined - were selected for the study. To measure the achievement, affiliation and power motives, an Indian adaptation of Symonds' set of pictures was used. Kureshi's test consisting of 10 plates measures 5 motives: achievement, affiliation, power, aggression and security. The plates which measured n-achievement, n-affiliation and n-power were presented individually to the members of both the groups and they were asked to write stories. The responses from stories were scored on the basis of Kureshi's Key. It was evident that the disciplined and indisciplined students differed markedly from each other in their n-achievement, n-affiliation and n-power. Further, the disciplined group had a much higher n-achievement than the indisciplined one. But the indisciplined group had much higher n-affiliation as well as n-power than the disciplined group. There was greater variability in the disciplined group than the indisciplined one.

363 SUKHANI S: Development of study habits inventory for college students. Education 1969, 48(6), 5-9.

Discusses the following steps adopted in the construction and development of the inventory: 1) collection of items; 2) pre-tryout; 3) tryout; 4) scoring; 5) item analysis. The inventory was tried out on 300 male students of the faculties of science, commerce and social sciences. The items in statement form were framed in Hindi under five areas: a) techniques of study, b) ability, c) interests and attitudes, d) environmental factors, e) nature and temperament. Each statement was based on a 3-point scale (yes, sometimes and never) and the students were instructed to mark in the appropriate column, whichever was applicable in their case. Out of 93 items, 15 desirable and 15 undesirable items which possessed the highest discriminating power were selected for the final form. The reliability was found to be high. The validity of the inventory was found to be significant though low. Suggestions for further research have been given.

364 TRIPATHI S N: Some errors in history answers - a psychological interpretation. Rajasthan Board Journal of Education 1969, 5(2), 28-32.

This paper is based upon a study of answers written by higher secondary students. It is suggested that the errors and confusions of students could be explained in terms of the following psychological processes: 1. Dominance of the unusual, sharpening and normalizing tendencies. Certain striking and novel details become sharper and other facts recede into the background. 2. Tendency to interpret history in the light of one's own experiences. The basis of present day experiences intrude upon the historical description. 3. Retrospective inhibition as seen in confusing one period with another. This interference is greatest when topics are partly similar. 4. Errors due to strong associations. Certain aspects are strongly associated with certain historical names and similar aspects in association with other names are ignored. 5. Inadequate understanding of ancient geography. 6. Lack of elementary knowledge of archaeology. The students are unable to distinguish tentative hypotheses from definite conclusions. Suitable teaching procedures should be adopted if these errors are to be eliminated.

365 AHLUWALIA S P: Some researchable areas in secondary education in India. Progress of Education 1969, 44(1), 7-11, 6. 7 ref.

The following potential areas of research have been suggested: 1) comparative studies of the programmes in secondary education in India with those of some countries of Asia and Europe; 2) case studies of the internal organization of the schools which are known for their efficiency, effectiveness and performance; 3) changes in headmasters' professional and social status i.e. job responsibilities, role perceptions, role expectations and role conflicts; 4) trends in selection, appointment and preparation of administrative personnel; 5) administrator-community relationship, teacher-administrator relationship, administrator-student relationship; 6) teacher participation in administration; 7) changes in secondary education vis-a-vis changes in educational objectives; 8) impact of democracy on secondary education; 9) curriculum studies.

366 DOSAJH N L: Educational research and the teacher. Haryana Journal of Education 1969, 2(3), 19-20, 25.

The following three levels of educational research have been discussed: 1. Fundamental or pure research. The main aim is extension of the existing knowledge and the new knowledge may find immediate application or may be used at a later stage. 2. Applied research. This is taken up to find out solutions for certain problems which need immediate attention and it is generally meant for specialists, who are trained in techniques of finer research. 3. Action research or problem solving. This is necessary for all teachers for tackling everyday problems in the classroom. The approach of the teacher is more careful, disciplined and objective. Action research helps in the professional growth of teachers and in improving the existing school practices.

367 PILLAI N P, VASANTHA RAMKUMAR: Matching teachers in research on teaching. Journal of Educational Research and Extension 1969, 6(1), 1-6. 34 ref.

It is pointed out that research studies on teaching usuallly ignore the important variable - the teacher. It is suggested that the following details should be kept in mind by experimenters: 1) an awareness of the importance of the teacher as a significant variable in designing experiments on teaching; 2) a say in the choice of teachers; 3) not to decide before hand which teacher is to teach in which manner; 4) providing an opportunity to teachers to discuss their preferences; 5) ensuring maximum cooperation on the part of the teachers; 6) watching the teachers on measurable qualities as age, sex, professional qualification, length of service etc; 7) watching as far as possible the subtle qualifies of teachers such as interest, attitude, motivation etc; 8) interpreting the findings and present conclusions taking into account the contribution or detraction of the teachers' work.

EDUCATIONAL SOCIOLOGY

368 D'SOUZA A A: Home and school. Rajasthan Board Journal of Education 1969, 5(2), 7-10.

The following reasons are attributed for the lack of rapport between parents and school authorities: 1. Parents' judgement of their children are highly subjective whereas the teachers' judgement tend to be objective. The conflict in judgements is a source of tension. 2. The values of the school (because of the middle class origin and outlooks of the majority of teachers and heads of schools) conflict with the values of both upper class and working class homes. 3. The exaggerated self-importance of most of the school authorities and their indifference to parents' views. 4. Parents' lack of interest in the schools and their unjust criticism of teachers. It is pointed out that real understanding and mutual cooperation between home and school is important and that schools can play a significant part in providing for the special needs of children from poorer and less-privileged strata of society, thereby contributing to their social mobility and economic advancement.

369 D'SOUZA A A: Human factor in education. Bombay, Orient Longmans, 1969. XIV, 282p.

It is observed that overemphasis on science-based and productive centred aspect of education has tended to neglect the most important ideal of education - the moulding of the whole personality with the fully developed physical, mental, emotional, moral and spiritual characteristics. Since education is essentially the influence of two groups of persons-parents and teachers, the human factor is emphasised. The following are the chapter headings: 1) human factor in education; 2) some heresies in modern education; 3) education and the individual; 4) some dynamic forces in educating the individual; 5) missing component in education; 6) neglected factor in education; 7) healthy mind in a healthy body; 8) role of games and athletics in the school; 9) education of character; 10) authority and freedom in education; 11) challenge of religious education; 12) home, school, society and the State in education; 13) education for parenthood; 14) problem of sex education; 15) Peckham experiment in family education; 16) school and society; 17) democracy and education; 18) education for good citizenship today; 19) education for national integration; 20) education for international understanding; 21) planning an ideal curriculum; 22) basic education - activity education and work-experience; 23) functional social service programme in schools; 24) play-way in education; 25) child-centred or life-centred school; 26) vocational education for all; 27) linking learning with earning; 28) role of student activities in the school; 29) education for leisure; 30) vitalising the school library; 31) use of audio-visual aids in education; 32) films and education; 33) education by radio; 34) teacher-centred school; 35) teacher in the modern world; 36) tewards a philosophy of education.

370 KASTHURI RANGASWAMY T, VISVESVARAN H: Socio-economic status of students in some long-established high schools in Coimbatore before and after independence. Journal of Educational Research and Extension 1969, 6(1), 12-19.

Data were collected through a questionnaire consisting of 3 parts: Part 1 sought information regarding socio-economic status and other details of students who took SSLC examination during the years 1943-47 and 1963-67. Part 11 sought the same information for students in standard XI in 1967-68. Part 111 was the teachers' assessment of pupils. Some of the important findings are: 1) there is a vast improvement in percentage of rural students attending schools, after independence; 2) there has also been an increase in the percentage of students from families of lower socio-economic status. The following recommendations are made: 1) a large number of polytechnics and colleges may be opened in rural areas; 2) a liberal system of financial assistance to students should be evolved to equalise educational opportunity; 3) provision should be made in schools for remedial programme to students from families of low socio-economic and educational status.

371 KUNDU C L: Social change and education. Quest in Education 1969, 6(3), 147-53. 6 ref.

The social change has repercussions on the school system because the schools functions as agents of innovation and social control. The following are some areas where social change has put new demands on education. 1. The changing technology necessitates continuous curriculum revision. Besides, the fast rate of change requires that individuals should be imparted basic intellectual skills necessary to readjust themselves to the changing needs. 2. The growth in population influences educational policies and procedures at all levels. 3. The joint-family system exerted a socialising and culture transmitting influence. But the system is disintegrating due to high mobility of the modern society. This has placed additional responsibilities on the schools. 4. The growth and development of metropolitan cities with great cultural diversity of their populations have forced schools to make special provisions to enable acculturation of various groups. The schools are also likely to find themselves in conflict with parents with regard to their attempts to influence the social behaviour of students. The schools, then, will have to involve themselves in reeducation of parents.

372 RAO V K R V: National integration through education. University News 1969, 7(9), 9-12.

The following steps taken by the Ministry of Education and Youth Services with a view to promoting national integration have been discussed: 1) establishment of National Integration Samitis at university level consisting of teachers and students to take effective measures to curb regionalism and communalism in university life; 2) establishment of the National Board of School Textbooks which in cooperation with the Boards at the State level, would continuously review textbooks to ensure that they promote national integration; 3) setting up of committees of writers, educationists and student leaders which would suggest various measures to promote national integration; 4) implementation of the following programmes through the National Book Trust - a) translation of about ten outstanding books from each Indian language into every other Indian language, b) production of popularly priced books in the series: National Biographies of important all-India figures, c) production of core books in certain important disciplines at university level, d) production of series of books which aim at making available to the ordinary educated person knowledge about all aspects of India in simple and readable volumes; 5) launching of a scheme known as, 'Nehru Bal Pustakalaya' to produce cheap supplementary reading material for children; 6) setting up of a Central Institute of Indian Languages and Regional Institutes of Languages. The other programmes which are a part of the Fourth Plan of the Ministry for national integration are the exchange of students in camps, including non-student youth, national service programme, youth festivals, etc. The following suggestions have been offered: 1) making attempts to promote entry into each university of selected groups of students from other regions and language groups in the country; 2) adoption of certain devices like social service leagues, literacy work, rural camps by schools, colleges and universities; 3) providing an opportunity for every student to take to some field work which would give a personal glimpse of the reality that constitutes the masses of India.

373 RUHELA S P: Social determinants of educability in India. Delhi, Jain Brothers, 1969. XXVII, 267p.

Social determinants of educability is the most important aspect of sociological foundations of education. The book contains 23 papers. The aim of these papers, it is observed, is to discover the social factors hindering the educational possibilities of Indian children. The following are the papers: 1. Ruhela S P: Social determinants of educability - the concept and a review of studies in India. 2. Floud J, Halsey A H: Social determinants of educability. 3. Sarkar S N: Some psychological factors underlying educability. 4. Venkatarayappa K N: Education and society in India. 5. Anderson C A: Social context of educational planning. 6. Vyas K C: Education for the gifted. 7. Uday Shankar: Social determinants of delinquency. 8. D'Souza V S: Education, social structure and democracy in India. 9. Goswami R: School teacher as a determinant of educability in India. 10. Ahluwalia S P: Neighbourhood school, its importance and implications. 11. Oad L K: Democratic decentralization and its impact on education. 12. Roy Burman B K: Educational problems of the tribal communities in India. 13. Suneet Veer Singh: Teen-agers of today - never had it so good. 14. Chitta Ranjan C N: Thoughts on student unrest. 15. Joshi P C: Our commitment. 16. Chauhan D S: Behaviour of our youth. 17. Aiyer S P: Students and politics in India, the dangers of studentocracy. 18. Ramji M T: Education in values, socio-philosophical perspectives. 19. Joshi P C: Literacy and education. 20. John V V: Language in a pressure cooker. 21. Ruhela S P: Towards a sociology of the problems of Indian education. 22. Mehdi B: Problems of adjustment among the gifted children. 23. Goel B S: Caste and class tensions in Indian education. 24. Ruhela S P: Education of a nomadic community in India - a sociological case study.

374 SHARMA K D: Socio-economic status of parents as determiner of curricular and occupational choices of school boys. Journal of Educational Research and Extension 1969, 6(1), 20-31.

A questionnaire study was conducted among 100 students of X class (50 of arts group and 50 of science group) of ages 15-18. Some of the important findings of the study are: 1) 77%, 67.6% and 25% of students of the upper, middle and lower classes respectively had offered science subjects. This shows that the level of socio-economic status influences the choice of subjects made by the students; 2) 25% of students from the lower classes and only 2% from the middle classes showed dissatisfaction with their present choice of subjects; 3) 85% of students of upper class received some help from their parents in the choice of subjects, whereas in the lower class only 45% of students did so; 4) teachers had no say in the curriculum choices of students; 5) the high and middle class groups differed significantly from each other with respect to their occupational choices. Thus, it is explicit that curricular and occupational choices are status-ridden. It is suggested that efforts should be made in schools to wipe out status feelings among students.

EXAMINATION AND EVALUATION

375 BIR SINGH: How schools cause failures - a study. Rajasthan Board Journal of Education 1969, 5(2), 11-15.

The purpose of the study was to know the important reasons of students' failures in examinations. Two hundred and thirty boys belonging to 107 institutions of Madhya Pradesh and Uttar Pradesh formed the subjects of the study. Data were collected from the students themselves, parents, heads of institutions, class teachers and subject teachers. The following conclusions were arrived at with regard to the causes of failures: 1. 67% of failures were due to the poor teaching skill of teachers. Poor teaching in English and Mathematics contributed to 20% and 13% of failures respectively. 3. Irresponsible conduct of teachers was responsible for 19% of failures. 3. Teachers not being interested in the welfare of all the pupils equally were responsible for 10% of failures. 4. Illegible and slow hand-writing of pupils, unreliable marking in examinations and lack of funds with educational institutions, put together were responsible for 8% of failures.

376 DAVE R H, SRIVASTAVA H S: Decade of examination reform in India. NIE Journal 1969, 3(6), 69-76. 18 ref.

The main focus of the discussion is on the Central Examination Unit established by the Ministry of Education (Government of India) in 1958. The unit now functions as a part of the Department of Curriculum and Evaluation of the National Institute of Education under the National Council of Educational Research and Training. The two major goals of examination reform envisaged by the unit were: 1) improvement of measurement value; 2) enhancement of pedagogical value. A comprehensive programme of reform was evolved in both academic and administrative areas. Functional approach was stressed. The following State agencies collaborate in the programme of reform: Boards of secondary education, departments of education, evaluation units, institutes of education, university departments of education and training institutions. Annual conferences of chairmen and secretaries of the boards of secondary education are held at which all agencies conducting external examination are represented. The following are the work areas of reform: 1) research; 2) training programmes; 3) extension programmes; 4) development programmes; 5) publications. The achievement in each of these areas is described. The programmes of reform have made favourable impact on the educational field.

377 DHARIWAL A S: Inherent weaknesses of the system of examination. Statesman 18 August 1969, p.6, Cols. 4-6. 1860 words.

Examination marks are a dependent variable. They should not be taken as an absolute measure of the knowledge possessed by the examinee. Besides, ideas about the true assessment of academic achievements change with the modes and techniques of reporting examination marks. Evaluation of academic attainments is amenable only to indirect measurement. A test is totally valid only when it measures the students on all the measurable and examinable units which can be done only by the classroom teacher and not by any external agency. At all stages, from matriculation to post-graduate, purely external university examinations, though should be open to all, are needed only for the selected few for screening and filtering purposes. Their frequency should be increased and they should be organized on scientific lines and made tougher. Schools and colleges should be authorised to issue certificates in terms of ranks. High School Leaving Certificates issued by headmasters should become the minimum qualification for recruitment to services, including the Central Services. It should be compulsory for all heads of institutions, at all stages to send up a fixed quota of best students selected on the basis of internal examinations.

378 **HARPER A E**: Reliability of examinations in India. NIE Journal 1969, 3(6):. 5-12. 7 ref.

The unreliability of traditional examinations is shown: Reliability of marking ranges from about .75 to about .85; but total examination reliability ranges between .30 to .70. These reliabilities are unacceptable for the purpose for which examinations are held. The objective examination is more reliable because it is based on a more adequate sampling of what the student knows and of what he is able to do with his knowledge. Hence, it is recommended that objective type examinations should be held.

379 **ISHWAR R C**: What ails the examination system? Searchlight 26 August 1969, p.4, Cols.3-5; p.5, Col. 8. 3700 words.

Any change in the system of examination necessarily implies a complete transformation in the system of education itself External examination constitutes memory test and it cannot be absolutely done away with. Internal assessment or semester system, by themselves cannot ensure proper evaluation. The transformation can be brought about only if all the relevant human factors act in a proper manner. The teachers should evolve a code of conduct for themselves and develop a sense of dedication and sacrifice. The cooperation of the guardians will have to be stipulated. The entry into educational institutions of such students who are detrimental to educational atmosphere in the campus should be restricted or denied as the case may be. However, this can happen only when academic institutions are self-supporting or adequately insured by the government patronage. The tuitional proficiency of every student should be periodically evaluated and students who show no progress must be forced to quit the institution and take up some suitable vocation. It is the responsibility of the teachers to make the periodical check up rather effective and it should be deemed as their failure if the students do not improve. There should be some sort of assessment of teachers and provision of incentives to competent teachers.

380 **KAKKAR S B**: Mass failures at higher secondary level. Educational Review 1969, 75(9), 207-11.

A study has been made of the results of the higher secondary schools of Jullundur district (for three years 1961, 1962, 1963) following the introduction of higher secondary school system. Besides examining the results of both core and elective groups, the causes of mass failures as indicated by the headmasters and the District Education Officer have been reported. Some of them are:

1) hasty implementation of the new scheme, without making any prior provision of suitably qualified staff and the necessary equipment; 2) poor achievement level of students particularly in English, mathematics and science; 3) faulty split-up of the curriculum: the core subjects emphasized in the first two years, leaving only one year for the heavy course of electives; 4) indiscriminate admissions in the 9th class; 5) wrong selection of elective subjects; 6) over-crowding in classes; 7) faulty allotment of teaching assignments to teachers; 8) enhanced school hours leaving no time for self-study; 9) increased work-load of teachers; 10) faulty examination system. The other major findings are; 1) the over-all results of the core subjects were not as dismal as that of the electives; 2) the differences among boys' and girls' schools in respect of a) the results in the core or electives, b) the continuing decline in these results, and c)the degree of such decline, were significant; 3) the results of the science group were lower than that of the humanities group; 4) the teacher-pupil ratio did not seem to be related to the pass percentage, as quite a few schools with favourable teacher-pupil ratio showed poor results; 5) the number of students on roll and teachers' qualifications did not seem to be related to the results.

381 KISHAN CHAND: Rajasthan scheme of internal assessment. NIE Journal 1969, 3(6), 20-2.

The need for evaluation to cover all areas of a students' growth - intellectual, physical, moral etc. is stressed. The scheme of internal assessment of Rajasthan Board of Secondary Education is described. It comprises, in addition to the academic area, the areas of physical health, character traits, interests, attitudes and cocurricular activities - literary, cultural and outdoor. The scope of each area has been clearly defined and the required tools of evaluation have been developed. The students' behaviour and performance are evaluated periodically and a separate certificate is awarded for internal evaluation at the end of the secondary or higher secondary stage. The scheme , it is contended, is neither difficult nor time consuming.

382 MANN S S: Critique of internal assessment system. Progress of Education 1969, 43(12), 412-15.

The following recommendations have been made to overcome the shortcomings of the internal assessment scheme: 1) showing the marks obtained in internal assessment and external examination separately; 2) instructing the schools and colleges to review their internal assessments and to examine the correct correlation between the internal and external assessment, and penalising the schools which indulge in persistent over-assessment; 3) making it compulsory for every student to pass in internal and external examination separately.

383 MISRA R G, RASTOGI K G: Oral examination in language testing. NIE Journal 1969, 3(6), 31-7. 4 ref.

The purpose of the oral examination at the secondary stage is to test the student's ability to express himself correctly, fluently and effectively. The oral test should be valid, reliable, objective and practicable. In order to build up construct validity, it is necessary to specify minutely the aspects of oral expression and to determine the criteria against which these aspects are to be assessed. (The aspects of oral expression, the criteria for assessment and the weightages for each aspect are given for two languages - Hindi and English). The oral test may consist of 3 sections - conversation, a short speech and questions. Topics for these should be selected from students' day to day experiences, immediate environment, co-curricular activities and current affairs. (some examples are given). Examiners should be trained in framing test items which should be informal and easily comprehensible and should present specific situations and motivate students to think and speak spontaneously. Assessment of students should be based on adequate evidence to make the test valid and reliable. Test items should be discussed by a panel of 3 members to increase the reliability. The scoring should be done on a five-point rating scale. With regard to practicability, educational planners and administrators should decide whether the test should be part of school examination or external examination.

384 PATEL S P: Unit tests and the improvement of classroom instruction. NIE Journal 1969, 3(6), 23-8.

A unit test may consist of one or all of the following types of questions - easay, short answer, and objective. It can be used to measure achievement, to help improve learning, or to assess mastery over a unit of teaching-learning. Unit tests contribute to the improvement of teaching and learning in the following ways: 1) it results in comprehensiveness in the learning of unit; 2) it serves as a tool for continuous evaluation; 3) it motivates students for higher achievement; 4) it helps the teacher to locate the strength and weakness of the pupils and to plan his teaching as well as remedial care accordingly. A unit test has to be prepared keeping the following dimensions in view: 1) objectives to be tested; 2) contents to be covered; 3) types and number of questions to be used; 4) maximum marks and 5) time to be alloted. The following aspects with regard to the preparation of the unit test are discussed: a) preparing the plan of the test; b) preparing the questions; c)assembling the questions; d) preparing question-wise analysis. It is suggested that each school should build up a test pool and the pool should be augmented by every teacher.

385 PRABHAKAR SINGH: Testing for critical thinking in social studies. NIE Journal 1969, 3(6), 53-8. 9 ref.

It is pointed out that critical thinking results in: 1) judging validity of evidence and 2) drawing contingent conclusions. The various aspects that are to be kept in view while planning and constructing a test in critical thinking are discussed. Procedures for testing critical thinking may include observation records, oral, practical and written tests. In written tests, essay type questions can obtain better evidence of critical thinking. The following salient features of test items on critical thinking for higher secondary stage are given with illustrations: 1) a simple generalization can offer good testing opportunity; 2) a set of data can be made the basis for drawing a variety of inferential test exercises ; 3) a diagram or any other scheme can be useful for framing interpretational exercises; 4) a sustained composition expecting some original answer can furnish the requisite valid evidence; 5) inter-locking items deepen the level of critical thinking; 6) points of disjunction serve as useful testing situations; 7) evaluation of the bases of evidence involves critical thinking; 8) a fully inter-locked item needs razor-edge discrimination and characteristic critical thinking.

386 SAHA S N: Testing reading comprehension in English. NIE Journal 1969, 3(6), 13-19.

Reading comprehension is a composite of many specific abilities which are not innate and automatic gifts. These can be taught, cultivated and acquired. Unfortunately the nature of present-day examinations fail to exercise a conducive influence on reading comprehension. Questions on comprehension should stimulate the student to give evidence of abilities higher than mere recall or recognition of the plain sense of the passage. The test constructor should thoroughly analyse the passage in terms of its test potentialities. The passage selected should be content-free and culture-free and should not be abstract. Multiple-choice questions are well suited for the purpose. Together with multiple-choice questions, very short answer questions eliciting minimal expression may be asked. These questions would ask about important details, which demand critical understanding and inward participation on the part of student. A comprehension test with the correct answers given separately can be treated both as a formal public test and an informal classroom test. Questions on vocabulary in a comprehension test should be phrased so as to test the real understanding of the vocabulary rather than dictionary definitions and explanations.

387 SHAFIQ HASAN KHAN: Short-answer questions - their significance and limitations. NIE Journal 1969, 3(6), 64-8.

Short answer questions are generally ranked in between the essay and the objective type questions on the dimensions of objectivity of scoring, length of the answer and time taken to answer the question. Direct questions and fill-in form questions are the two categories of short answer questions. The following advantages are listed: 1) the questions are more valid than the objective type questions; 2) they enable better objectivity in scoring than essay type questions; 3) frequent use of these questions would enable pupils to develop higher abilities like sifting relevant material from irrelevant and summarizing the thoughts and facts to the desired end; 4) they have a greater discriminative value than the essay type questions; 5) the questions are easy to construct and can be employed profitably at various stages of the lesson. The following are the limitations: 1) the question, if not carefully worded, may evoke a variety of answers; 2) indiscriminate use of these questions may encourage pupils to learn bits of information rather than develop a wholesome understanding of the content; 3) students' ability to develop sustained arguments or narration cannot be tested by these questions.

388 SINGHA H S: How difficult should be a question paper. Rajasthan Board Journal of Education 1969, 5(2), 3-6.

The index of difficulty of an item of question paper depends on many factors of which the important ones are: 1) the particular educational objective tested; 2) the nature of content; 3) the ability level of the group; 4) the situation that is either simple and familiar or complex and unfamiliar; 5) the teaching method etc. Assuming that all questions in the test have estimated difficulty indices ranging between 5 and 95, the following 3 point scale is given: level A - difficulty indices lying between 5 and 35; level B - difficulty indices lying between 35 and 65; level C - difficulty indices lying between 65 and 95. Maximum discriminating power throughout the entire range of a test can ordinarily be obtained by a set of items, a large proportion of which cluster about the difficulty index of 50. (difficulty level - B - 70% and difficulty levels A&C 15% each). At times, it is possible that normal distribution of difficulty level is possible only by including a trivial or less valid questions. But in achievement tests validity is more important than their difficulty level; hence the need to balance validity and difficulty requirements for optimum efficiency of the test.

389 SUDARSANAM R: Concepts of 'testing' and its role in university research. Journal of the English Language Teaching 1969, 4(3), 82-92, 21 ref.

The following types of language tests, labelled according to their primary purposes, as 1) prognostic (aptitude); 2) diagnostic; 3) proficiency; and 4) achievement have been discussed in detail along with the design of each type of test which depends on a) the skills tested; b) the types of questioning, c) the types of responses, and d) the types of correction or scoring. In view of the importance of testing in the progress and improvement of educational system, universities have been urged to undertake the task of examination reform.

FINANCE

390 MATHUR M V: Universities and their finances. University News 1969, 7(7), 10-12.

The unsatisfactory grant-in-aid systems and the consequent unfavourable financial condition of universities are pointed out. With regard to maintenance grants, it is suggested the State governments should make block grants fixed on the following basis: 1. It should be fixed for a period of 5 years and should cover the entire liability of the university. 2. Normal increase in expenditure from year to year should be taken into consideration. 3. It should include essential development expenditure which is not covered by U.G.C. grants. Simplifying the procedures and streamlining the machinery is suggested to reduce the delay in making grants. In this regard, creating a contingence reserve for the university, it is observed, would be better. It is recommended that the state governments should consult the universities and include in their memoranda to the Finance Commission, the financial requirements of universities and the Finance Commission should separately earmark the funds for universities. It is suggested that the development programmes should be approved by all the 3 parties - the U G C the university and the state government - before the commencement of the financial year. To tide over the difficulties arising out of the delay in making the grants, it is advocated that one of the following two ways could be adopted: 1) 50% of the grants should be released as soon as the scheme is approved and the rest released on receipt of the progress report; 2) the university should be provided with a permanent development advance. With regard to financial accountability of universities, it is suggested that the state governments should accept a chartered accountant's certificates of utilization of grants.

391 PURI R R: University finances and their accountability. University News 1969, 7(8), 16-18.

It is pointed out that since the government sources contribute 71.2% of the total educational expenditure the government has to ensure proper utilization of the public money. Mention is made of the power of the University Grants Commission (UGC) to carry out inspections of universities or to withhold grants. The following suggestions are given: The UGC must have larger funds. The universities should be given block grants by the state governments for 5 years instead of on year to year basis. The block grants should take into consideration the net deficit of the university, its development expenditure, unanticipated programmes etc. To minimise delay in allocation of funds for development projects, the state governments should consider the UGC's approval of the projects as final instead of themselves re-scrutinising the projects. A tripartite committee consisting of the representatives of the state government, the UGC and the university concerned should fix the block grant. Similarly, a representative from the state government should be included in the visiting committee of the UGC. The state governments in their demands to the Finance Commission, should show separately the financial needs of their universities and the Finance Commission should earmark funds exclusively for the universities. It will be better if these funds are placed at the disposal of the UGC for direct disbursement to universities. The present position of UGC serving as a buffer between the governments and the universities on the one hand and the Controller and Auditor General and other government audit officers (acting on behalf of the parliament and state legislatures and the governments) on the other, might be continued undisturbed However, the Commission can further tighten its systems of financial control of expenditure. The universities also should welcome any exacting conditions which the Commission may impose on them for the utilization of grants.

HEALTH CARE

392 JOSHI M G, MORE C S, KOLPE B A: Extension in other fields - health education. Maharashtra Educational Journal 1969, 17(11), 289-92.

The total school health programme should include the following six areas: 1) health education - direct instruction in health and hygiene; 2) health preservation - nutritive school meals; 3) health promotion - physical education, games and activities; 4) health protection - healthy school environment, sanitation, immunization; 5) health correction - a school clinic; 6) health appraisal - a medical inspection by experts. The new administrative set-up that should be evolved at the central, state, district, village and school levels has been described.

HIGHER EDUCATION

393 GUSFIELD J R: Academic milieu - students and teachers in India and the United States (In Altbach P G. Turmoil and transition - higher education and student politics in India. Bombay, Lalvani Publishing House, 1968. 93-127).

A comparative study is made of the relationship between faculty and students in India and the United States. The following differences are identified. There exists a strong youth culture in the American university campuses which is a source of its solidarity. Peer-like and family-like relations between the teacher and the student is prevalent in the American campuses. The Indian students have inherited a tradition of intensive political activism, but the lack of a strong youth culture weakens the capacity of the students for continuous and regularised influences on the faculty members who are conscious of age and authority in their relations with students. The affluence and job surplus of the United States and the poverty and job uncertainty of Indian life, both have their distinct impact on the faculty-student relations. The different cultures of professors in India and in the United States have their distinct influences on the students. The American professor has a wide latitude in determining the content of courses, the nature of examinations and the grade given to a student. The Indian professor has no such discretion which discourages personal relationships. Thus the American students are far more personalised and the Indian students are far more politicized toward their faculty. It is predicted that the recent changes occuring in the American colleges and universities would result in greater politicization of American students and that in the case of India, the recent expansion of higher education would accentuate the already existing characteristics.

394 JOHN V V: Academic week-end, use and abuse of scholarly leisure. Times of India 4 July 1969, p.10, Cols. 3-5. 1560 words.

It is opined that flowering of scholarship is to be sought in an environment of freedom and leisure. It is pointed out that most universities prescribe that students should attend three-fourths of the classes given in their chosen subjects, whereas the minimum number of classes that should be given in any subject has not been prescribed. It is observed that if the requirements of curriculum and of attendance could be more clearly defined, then the work of the colleges could be rationally scheduled providing ample leisure without which no high quality of education can be ensured. The leisure can be utilised by students for self study and by teachers for scholarly work like specialised study in their own field, development of new interests in other fields, writing textbooks etc. It is suggested that the north Indian universities could follow the pattern of five-day week schedule as the south Indian universities instead of the six-day week schedule and the academic year could be divided into three terms of ten weeks each with suitable breaks in-between. In such a system, it is pointed out, it may be possible to devise a fourth term in the year, more or less to coincide with the annual examination and the summer vacation, to provide for remedial or enrichment courses. It is observed that the brief week-end programmes of teachers and students could lead to ambitious programmes during the long vacations.

395 VAKIL C N: University education must be revamped. Free Press Journal 19 July 1969, p.4, Cols. 3-6. 1250 words.

The need for restoring university education to its proper position by having the right type of teachers as well as the right type of students has been highlighted. To this end it has been suggested that university education should be available only to those who are intellectually and physically well-endowed for the type of mental and physical discipline that university education involves, irrespective of the financial capacity of such persons. This requires the following - a) public awareness of the true functions of a university, b) government sympathy and support for a change in the right direction and complete autonomy for the universities, c) adequate opportunities and facilities to attract the best teachers and students.

396 VARMA R S: Some observations on college education. Modern Review 1969, 124(7), 525-8.

The drawbacks of the present day college education have been discussed and the following suggestions offered to rectify the situation: 1) maintaining the teacher-student ratio at 1:6; 2) encouraging teachers to seek better opportunities whenever possible; 3) allowing them all freedom to form associations to raise their academic standard and protect their rights; 4) granting them representation on the governing council of the college; 5) providing in-service training to teachers; 6) framing the time-table in a way as to leave the students ample time for self-study; 7) giving teachers full academic freedom in framing the courses and syllabus; 8) teaching subjects like language, history and culture, social science and moral science to engineering and science students; 9) providing guidance and assistance to students in solving their problems.

INSPECTION

397 GUPTA L D: Better school supervision. Haryana Journal of Education 1969, 2(3), 30-5.

The following measures have been recommended by the Conference of the Directors of Public Instruction for the improvement of school supervision: 1. There should be subject specialists for inspection of schools and the existing inspectors/supervisors should be provided remedial courses. The district education officer (DEO) should coordinate the working of the various subject specialists. 2. The DEO and other supporting staff should be provided in-service training to get themselves acquainted with the latest trends in education. 3. The supervisors should arrange regular courses and discussions with better qualified university teachers etc., for the professional growth of the teachers. 4. The supervisors should draw up improvement plan for their area in consultation with institutional heads. 5. The supervisors must play an important role in the successful functioning of 'school complexes'. 6. The supervisors may adopt a few schools and try out some experiments on topics like improvement of handwriting and speed in reading, reduction of wastage and stagnation etc. 7) Additional supervisory staff should be appointed.

398 SHARMA R C: Dilemma of a district education officer. Naya Shikshak (Teacher Today) 1969, 12(1), 28-35. 7 ref.

It is suggested that the district educational officer who is mainly an administrator should not play the supervisory role also for the following reasons: 1) the administrative role puts a person in a position of authority whereas the supervisory role demands an uninhibited two-way communication between the supervisor and the teahcer; 2) educational supervision is such that no single person can hold supervisory role in all areas of curriculum; 3) the profession expects the administrative role to be rigidly functioning within a given framework whereas it expects the supervisory role to promote experimentation and innovation. It is reminded that the Education Commission (1964-66) has suggested that the district educational administrative officer should have a lower status than the officer incharge of supervision. However, the author advocates that the supervisory role should be held by subject supervisors who should assist the district educational officer and should report to him.

INSTRUCTIONAL MATERIAL AND AIDS

399 INDIA. UNIVERSITY GRANTS COMMISSION: Audio-visual aids in higher education - report of the Committee on Audiovisual Aids for Higher Education. Delhi, the Commission, 1969. 72p.

The following observations and recommendations are made by the committee: 1. The university film council should be transferred to the Inter-university Board of India & Ceylon. The film Council should survey the availability and use of films, filmstrips and slides in India and other countries and should prepare educational films directly related to course contents in various subjects. 2. The All India Radio should increase the duration of university programmes, coordinate the working of various stations in this regard; tape-records of the broadcasts and prints of the scripts of lectures should be circulated to universities. 3. The open circuit television at Delhi could be used more fully for educational purposes. The projected internal and global satellite would play an important role in expansion of educational faicilities at all levels. The possibility of setting up closed circuit television in one or two universities may be explored in case indefinite delay is anticipated in the setting up of the satellite project. 4. Some of the areas in which instruction can be developed through programmed learning are given. The need for research in and proper training in the techniques of programmed learning should be stressed. There should be collaboration between subject specialists and the psychologists in the preparation of programmes. The schools of education proposed to be supported by the University Grants Commission would devote their attention to the various programmes of audio-visual education and programmed instruction. 5. Language laboratories should be set up in as many universities as possible and in at least one university in each State. Careful planning is necessary and it should be ensured that strong language teaching programmes already exist in the concerned universities. 6. There is need to create an awareness among the teachers with regard to the advantages of educational technology. Steps should be taken to set up immediately 3 or 4 centres of educational technology in selected universities. The department of audio-visual education of the NCERT may be strengthened and its functions broadbased to enable it to extend its activities to the universities and colleges.

LANGUAGE PROBLEM

400 JANGIRA N K: Introduction of regional languages as the media of instruction - tasks ahead. Quest in Education 1969, 6(3), 142-6.

In order to plan effective programmes for introducing regional languages as media of instruction, the following steps are suggested: 1. Knowledge of the past perspective. 2. Study of the psychology of pressures for retaining English as the medium of instruction. 3. Development of criteria for measuring the efficiency of the languages to be used as the media of instruction. 4. Enrichment of the languages through the adoption of common terminology. Adoption of a common script also may be considered. 5. Provision for the auxiliary medium of education. Hindi is more appropriate for this purpose. 6. Identification of the optimum levels of attainments of children at various stages of education in the language of instruction. 7. Development of the instructional materials in the regional languages. 8. Orientation of the teachers to the new task.

401 SATTANATHAN A N: Bilingualism at college level - new approach to teaching. Mail 19 July 1969, p.6, Cols. 3-7; p.7, Col.1. 2000 words.

The suggestions are: 1) gathering a nucleus of senior lecturers proficient in lecturing in Indian languages to guide junior lecturers and research scholars in developing bilingual scholarship; 2) organising Central Refresher Schools for young scholars to develop their skill in expressing scientific and other modern ideas in Indian languages, on the model of the schools for teaching English now sponsored by the British Council; 3) making a concerted attempt to lengthen the pre-university course (P.U.C) so that more time can be devoted to the study of English and in the meanwhile giving high priority to the study of English at the school leaving stage and at the P.U.C.; 4) giving freedom to all college teachers including those in technical colleges to talk in a mixed jargon so that the students understand their subject properly; 5) permitting students to write their examinations, either in English or in an Indian language or in a mixed jargon.

MORAL EDUCATION

402 SATTANATHAN A N: Secularism and education - practices in U.K., U.S.A., vis-a-vis India. Mail 10 September 1969, p.4, Cols. 2-5. 2400 words.

Institutions run by minorities are allowed to impart religious instruction, whereas the majority of government-run institutions, which are attended by Hindu boys and girls, are not allowed to impart religious instruction. Since independence, only the number of government institutions has been increasing where education is entirely secular and non-religious. As a result, the younger generations are completely bereft of religious education while the elders are still steeped in the traditional faith. This is in contrast to the situation in England, where all State schools are conducted as Christian schools,in spite of the separation of the Church and the State. There is compulsory religious instruction. Though there is no religious compulsion in the State schools in America because of its secular policy, the population seems to be more religious than its British counterpart. There is a strong feeling among Indians that secularism should not be equated with irreligion. Religious neutrality of the State should not be a bar to a comparative and sympathetic study of all religions and the lives of their founders. However, it is very difficult to devise a curriculum of such religious instruction. Therefore, the national education policy adopted by the Central government about a year ago does not say anything about religious or moral education. However, it is doubtful if a non-religious educational base will lead to the cultivation of a scientific and modernistic outlook among Indians.

403 CHOPDE S D: Organisational problems of varsity sports. University News 1969, 7(9), 18-19.

The general problems of organising sports in universities and colleges have been discussed along with suggestions for improvement: 1. Lack of a sound pattern of organisation for sports. The universities and colleges should have departments of health, physical education and recreation and advisory boards to decide policy matters regarding facilities and finance. 2. Lack of qualified staff of physical education and coaches in adequate numbers. The department of health, physical education and recreation in an affiliating university should have a head of the department equal in qualification and status to other heads of departments. There must be assistants in the ratio of 1 for 20 colleges affiliated to the university. In the case of teaching universities, the assistants should be in ratio of 1:250 students; 3. Lack of student interest in sports mainly due to a) pressure of academic work, b) absence of satisfactory sports background, c) lack of instruction under qualified staff, d) general apathy and indifference to sports in universities and national life; 4. Enrolling professional sportsmen in universities and colleges who do not attend classes, but participate in the sports and tournaments. This practice must be stopped; 5. Lack of facilities and financial support; 6. Lack of supervisory service. Supervision should be undertaken by the vice-chancellor, exeoutive officer of the university and the college principal.

404 D'SOUZA D: Survey of physical education programmes of the Girls' Secondary Schools of Tamil Nadu. Vyayam 1969, August, 39-41.

The survey revealed the following: a) the large deficiency of the physical education teachers; b) lack of recognition and incentive for higher training in physical education; c) preference for bifocal physical education teachers; d) large classes; e) soft syllabus devoid of vigorous activities and those calling for creative and superior work; and f) incomplete implementation of the syllabi prescribed. The following recommendations have been made: 1) preparing a work book for conducting physical education programmes; 2) examining the plan of each school on the soundness of educational principles and feasibility for the purposes of approval and making grants; 3) modifying the syllabus in the light of the needs and interests of students and the opinions of teachers; 4) making a separate survey as to the effectiveness of participation periods; 5) making a job analysis of teachers and modifying the training programmes on the basis of the competencies and skills expected of teachers; 6) not limiting the physical education programmes to the amount available through games fees alone; 7) evolving norms for capita expenditure in physical education to serve as criteria for evaluating schools in terms of adequacy for physical education programmes; 8) evolving policies and procedures of planning and utilization of facilities available in the community for purposes of physical recreation on a state-wide basis; 9) making efforts to bring into light the identity of physical education as a specialized field of preparation; 10) conducting orientation programme in physical education for non-physical education teachers required to supervise physical education classes; 11) making a similar survey exclusively for boys' schools and co-educational schools; 12) making a survey of articulation of physical education programmes in elementary schools with those in schools for girls and those in secondary schools with those in higher education.

POLICY AND PLANNING

405 Age limit goes - admission to engineering colleges /news item/ Times of India 24 September 1969, p.14, Cols. 6-7. 660 words.

The All India Council for Technical Education took the following decisions in its 20th meeting (23 September 1969) at Delhi: 1) the lower age limit of 16 years for admission to engineering colleges will be done away with; 2) a high power committee consisting of experts in technical education and industry would be set up to examine the entire system of polytechnic education; 3) an expert group would study the complementary roles of engineering institutions and research laboratories in a coherent and integrated system of science and engineering; 4) 60 or 70 in-service training centres would be provided for engineering teachers of degree and diploma courses; 5) as an integral part of the total process of technical training, polytechnics and industry located near each other would cooperate in organizing sand-wich courses to train the right type of technicians; 6) the council suggested the holding of seminars and conferences in which young engineering graduates seeking self-employment can meet and discuss with representatives of small scale industries, State industries and financial institutions.

408 D'MELLO R G: Dispossessed. Seminar 1969, No.120, 24-7.

The unemployment problem among different categories of educated persons over the last few years has been discussed. The political, psychological and socio-economic implications of mass unemployment have been presented. The remedial measures suggested are: 1) applying cost benefit analysis to education; 2) adopting a planned manpower programme.

409 GOEL B S: Towards realistic educational planning in India. Naya Shikshak (Teacher Today) 1969, 11(4), 6-15.

Educational planning related with 1) purely educational goals; 2) economic goals; 3) social goals and 4) political goals are the four dimensions mentioned. It is pleaded that educational planning should be realistic instead of being over-ambitious. For realistic planning, it is suggested, the following instruments are needed: 1) knowledge of the history of the country's education; 2) knowledge of comparative education; 3) knowledge of the economic feasibility of the proposed plan; 4) knowledge of the backing that would be given by the political set-up to the proposed plan; 5) knowledge of the current socio-cultural set-up; 6) knowledge whether the plan would be carried out by the concerned educational and other personnel. It is suggested that planning at the national level should be discontinued, that the quantitative planning should be done area-wise on the basis of similarity and that qualitative improvement should be left to individual institutions although planning in teacher training, textbooks etc. can be done at the State or Central level.

410 GUPTA A: Science policy - economic, sociological aspects. Economic Times 22 August 1969, p.7, Cols. 3-6; p.11,, Col. 8 2660 words.

Against the present social and economic background of India, the 3 basic functions of science are: a) sociological functions, b) to help economic progress, c) intellectual advancement. A. Basic science education at the primary and secondary levels and functional education to the masses are the social functions of science. It has two implications: 1) sociological and 2) economical. 1) with the help of simple scientific knowledge many of the social evils like untouchability and superstitions could be eradicated; health and hygiene can be improved; 2) the economic aspect is that an individual can improve his earning capacity through improved . knowledge and use of machinery. In this regard more attention should be given to rural population. The primary requirements for this programme are adequate supply of trained teachers and well written textbooks. B. The science policy should have two aspects to help the economic progress: 1) industrialization by training of competent technical persons; 2) organizing fruitful scientific and technological research. Scientific and technological research are of 3 kinds: a) pure and basic research; b) applied research; c) c) developmental research. The pure and basic research should be done in the universities; this contributes to the intellectual advancement, the third function of science. Applied and developmental research should be done in government sponsored institutions.

411 HALDER S K: How not to tackle the problem of educated unemployed. Statesman 10 July 1969, p.6, Cols. 4-6. 1700 words.

It is argued that the aspirations of students and their occupational choices are determined by factors outside the control of schools and that it is wrong to assume that vocational guidance and reorientation of educational syllabuses would establish a meaningful link between education and employment. An individual's aspirations are determined by his perception of opportunities within the exchange sector of the economy. It is suggested that the vocational education should be directly related to areas where demand for skills is beginning to show up. Lower vocational skills should be learnt in factories through on-the-job training. It is pointed out that the most important cause of educational unemployment is the lack of capital and the slow growth of the economy. Creation of more capital raises the question of a choice between capital-intensive and labour-intensive developments and within labour-intensive development, between different combinations of high and low-level skills and how far education can be used as a substitute for physical capital. It is suggested that multiplicity of small-scale experiments rather than massive reforms in the entire system of education would enable development to proceed from the roots of the national economy.

412 INSTITUTE OF APPLIED MANPOWER RESEARCH, NEW DELHI: Indian scientists in the United States - a stock study. New Delhi, the Institute, 1969. 30p. 13 ref.

The report is based on the data made available by the National Science Foundation of the US from their National register of scientific and technical personnel. Out of 2,42,763 persons registered till the end of 1966, barely 1316 (0.54%) were

Indians. The distribution of Indian scientific and technical personnel is as follows: 1. Physical and life sciences - 1137 (86.4%). 2. Social sciences - 122 (9.3%). 3. All others - 57 (4.3%). The following characteristics have been analysed: a) sex, b) selected age-groups, c) highest degree, d) work activity, e) employment sectors. An analysis of the Indian registrants by their citizenship or visa-status indicates that 314 of the 1316 have taken over or were likely to take over American citizenship. It is the rest of them - over 1000 - who should be given priority consideration while formulating incentives to bring them to India.

413 JOHN V V: Attitudes. Seminar 1969, No. 120, 19-23.

Though unemployment is an economic problem it should be recognized as an educational problem since only a radical change in the goals, methods, and quality of the education can cure the ills of the economy. The meagre allocations made for education in the Plans and the manner in which they are wasted in implementing the Plans, lack of correlation between educational planning and the needs of the country, emphasis on quantitative expansion of education, and the failure of realistic education programmes (like basic education, Janata colleges, multipurpose schools, Rural Institutes), recruitment of graduates as clerks have all been stated as responsible for the present unemployment among the educated. Laying an embargo on the appointment of graduates as clerks, a radical change of attitudes of students towards productive work, modification of institutional programmes according to the needs of the community, introduction of new techniques and skills by institutions for creating job opportunities, adoption of educational improvement programmes of manageable dimension have been recommended as remedial measures.

414 JOHN V V: Man with a third - education and quality control. Times of India 23 September 1969, p.6, Cols. 3-5; p.7, Col. 1. 2000 words.

No policy of selective admission could be just unless it is ensured that those not selected are equipped with the minimum proficiencies required for a reasonable range of professions. It may also be necessary to reverse the present practice of employing university graduates in jobs for which no university education is necessary. The present proposal to extend the duration of elementary and secondary school to a total of twelve years is futile unless a clear decision is taken on the standards. The merit of the university should largely be judged not by the brilliance of the few, but the quality of its minimum product - third class graduates. The practicable course now would be to arrange continuing education courses as a remedial attention to the defective products. Meanwhile, sub-standard production should cease. The suggestions are: 1) determining the minimum standards for the various levels in education on the basis of internationally accepted norms and not on the basis of the size of the enrolment or the poor equipment with which the students arrive from the next lower stage; 2) evolving a system under which every student is allowed and encouraged to proceed at his own pace; 3) universities should develop greater sensitivity to the mental calibre of their students and the final result should also take into consideration the continuous evaluation of the students' work throughout the period of the course.

415 KANNAPPAN S: Realistic pricing. Seminar 1969, No.120, 17-19.

With regard to containing the problem of educated unemployment, it is shown that the case for raising the private costs of education to more realistic levels is more compelling than the case for aggregative equilibrium between the demand and the supply of educated workers. Some of the points put forth in support of the argument are: 1) the returns on investment in education are not as attractive as other options (A.C. Harberger and Nalla Gounden) and the returns to the individual exceed the returns to society (Mark Blaug); 2) a necessary pre-requisite for achieving equilibrium between demand and supply is that decision-making at all levels be increasingly guided by the social costs of providing a given unit of education; 3) there are not enough resources to meet the demands of all those who want education and the demand is greater if the cost is lower; 4) even if it can be demonstrated that there is a demand for some categories of the output of schools and colleges, the argument remains unchanged, for, this demand is at the lower price made possible by the subsidization of educational cost and all that it implies is that employers are encouraged to use this type of manpower even at low marginal productivity. The argument that realistic pricing will deprive many of education is only partially valid, for, the present methods of rationing educational opportunity tend to do the same. A policy of realistic pricing accompanied by a policy aimed at removing the disadvantages faced by the poor would adequately meet the situation.

416 NAIK J P: /Educated unemployed/ - the problem. Seminar 1969, No.120, 10-12.

Although the government should strive to secure full employment for all, whether educated or uneducated, an over-riding priority should be given to problems of educated unemployment. It has been regretted that no genuine efforts have been made in implementing either the long-term solutions viz. population control, and accelerated economic growth or the direct and effective programmes like selective admissions to higher secondary and university education because it is not socially acceptable. The bold alternative of utilising all available manpower by accelerating development is not undertaken because it does not seem to be politically and financially feasible. Even the academic debate on the subject is desultory, often lacking in depth and unsupported by meaningful research. The expansion of secondary and higher education in an unplanned manner against such background of inaction and drift has been stated to be responsible for the decreasing educational standards and the increasing unemployment and its effects.

417 SINHA R P: Manpower crisis. Seminar 1969, No.120, 13-16. 10 ref.

The consequences of persistent unemployment among the educated persons have been shown to be of economic, human and socio-political nature. The problem has been attributed to the following: 1) imbalance in supply-demand relations; 2) the highly structured labour market; 3) geographical immobility; 4) social prestige attached to certain jobs. Some of the corrective measures that can be taken to reduce the rate of unemployment to an acceptable level are: 1) raising the private cost of financing the children's education at secondary and higher levels; 2) vocationalizing the secondary school curricula; 3) tailoring educational policy to the manpower needs of the economy; 4) encouraging brain drain (as a short-term solution); 5) accelerating the rate of economic growth; 6) applying well-known tools of fiscal and monetary policy effectively, if unemployment is due to a slack in business activity; 7) dispensation of organized information about job opportunities elsewhere, in case of frictional employment ; 8) loosening the highly structured labour market by increases in wage rates geared to productivity and freedom to managerial decision-making; 9) adopting short term measures to improve mobility between areas and formulating a long-term policy to develop one national language to overcome the linguistic barriers within the country; 10) making efforts to educate people to alter their values with respect to job status.

418 SIVARAMAKRISHNAN K R: For development. Seminar 1969, No. 120, 28-31.

Deals with the problem of utilization of manpower for national development with reference to the growing number of educated persons seeking jobs and the capacity of the economy to gainfully absorb their services. The only long-term solution to the problem of unemployment is economic growth, which depends on the extent to which population explosion is restrained. An analysis of the pattern of job seekers and employment structure reveals that because of their wage-employment-oriented education and of social values, the educated persons from both urban and rural areas converge in the urban areas for jobs in the modern sector. High priority should be given in the future to expansion of output and employment in the intermediate and traditional sectors in the rural areas which will have to absorb nearly three-fourths of the country's labour force during the next decade. The educational implications of such a rural transformation would be to: 1) build up an organized body of knowledge relating to the entire field of development economics relating tor rural areas; 2) diversify and vocationalise the educational system to meet the manpower requirements for rural development; 3) promote appropriate values among the students at all stages of education; 4) create in students the spirit of entrepreneurship and leadership and the urge and confidence for self-employment.

SCIENCE EDUCATION

419 JOSHI A C: Scientific and technical education at the elementary and secondary levels (In Shah A B. Modernization of university teaching, teaching of natural and social sciences in India. Bombay, Nachiketa Publications, 1969, 9-25)

The main objective of science teaching at the elementary level is to orient the students in the scientific method of problem-solving which implies systematic observation and carrying out some simple experiments. For this the primary teacher training institutions must provide both content and methodology courses. The teacher trainees must also be trained in improvisation of instruments necessary for elementary experiments. The teaching of general science at the secondary stage should give greater importance to the understanding of the impact of science on society. The syllabus should be closely related to the everyday needs of the community as well as to the local environment. Methodologyof science, development of the scientific attitude and proper perspective of history of science should be emphasised. Students opting for elective science should study all branches of science and mathematics. Workshop practice should be stressed for all. As a prerequisite, the number of seats in science classes in universities should be increased to meet the demands for science teachers. Teacher training can be of 4-year integrated courses after higher secondary and one year courses after graduation. Regular refresher courses are needed for working teachers. Organizing district level service to repair damaged school laboratory equipment, production of good text-books and other reading material, instituting science club in every high school are other matters which require attention.

420 KURCHANIA W P: Study rooms for science subjects. School Science 1969, 7(1), 22-5.

Equipping the schools with theory cum practical rooms called study rooms which house both the lecture room and the laboratory has been suggested with a view to solving the difficulties faced in the organization of separate science laboratories. The study rooms should be so equipped as to enable the teacher to make the explanation of the material to be followed by the demonstration of experiments, and simple laboratory work by the pupils. These rooms may also be used for individual class and out of class practical studies of the pupils. It is recommended that each elementary school should have a study room and in secondary schools there should be separate study rooms for Physics, Chemistry and Biology. Details of the lay-out, general equipment and general get-up of the study rooms have been given. Besides being economical and sound on pedagogical grounds, the study rooms are more useful on hygienic grounds.

421 RAINA M K, SWAMI P: Developing creativity through investigatory projects. Teaching 1969, 42(1), 2-8. 15 ref.

Overcrowded syllabus, unimaginative teaching, stress on examinations, lack of proper amenities etc., are various reasons which stifle creativity. It is suggested that Science educators must develop systematic procedures, scientific situations and personalties, and the type of learning climate that will make students use scientific knowledge creatively. The investigatory project approach is advocated as it conforms to the 20 principles listed by Torrance for developing creative thinking ability. Through investigatory projects, students will develop an appreciation and understanding of the nature of discovery. The investigations will provide the necessary experience which will enable them to develop an independent spirit and to value intellectual pursuit. Examples of investigatory projects are given in

1) chemistry, 2) physics, 3) biology, 4) geography, 5) archaeology etc. It is suggested that the investigation should be done by individual students rather than by a group of students.

422 SAXENA K N: Science education, fostering of scientific talents. Naya Shikshak (Teacher Today) 1969, 11(4), 67-71.

Rich laboratory facilities, reading materials and individual project work have to be specially tailored to the academically bright students so that they may derive maximum benefits. The advantages derived from recent scientific and technological advances could be made use of to plan such courses. Mention is made of the programme of identifying and nurturing scientific talents introduced by the National Council of Educational Research and Training. The following problems are enumerated with regard to fostering of science talents: 1) assessment of the special requirements of the country with regard to scientific and technical manpower who had an opportunity of demonstrating their specific aptitude and then trained in a specific way through accelerated and intensive programmes; 2) identifying the different advancements in psychology, sociology, education, science and technology which can be made use of in the accerl accelerated programmes; 3) finding out the various mass communication media to create a scientific awareness and provide requisite motivation to students; 4) locating the changes that should be brought about in traditional educational methods; 5) finding out the different methods to identify the brilliant students; etc.

423 VERMA H C: Plea for standardisation of instruments and equipment for science education. Instruments India 1969, 4(7), 23-6.

A review of the activities of international and national bodies seized with the problem of teaching science in schools has been given. The urgent need for initiating activity by Indian Standards Institution in this field of science education is stressed. A plea is made for coordinating the work of various instrument committees and sub-committees already existing. The need for setting up a separate division council for standardization of instrumentation and instrument technology is also emphasised.

SECONDARY EDUCATION

424 SINGH C P: On problems of secondary education and teachers. Prachya Prabha 1969, 41(7), 19-22.

Some of the suggestions made are: 1) prescribing the same syllabus for higher secondary courses and pre-university courses; abolishing the pre-university courses ultimately; 2) abolition of diversification of courses upto class X; providing technical, vocational, agricultural schools at two levels i.e. after the primary stage and after the lower secondary stage; 3) restricting the opening of new schools; 4) payment of teachers' salaries be the sole responsibility of the government; 5) evolving a rational system of payment of grants to schools; 6) fixing the pay-scales of all categories of school employees; 7) establishing an autonomous Board of Secondary Education with separate sections for different purposes; 8) establishing a Judicial Arbitration Board to hear the appeals of teachers; 9) establishing a code of conduct for teachers which should be enforced through the teachers' association; 10) ensuring it by law that a) every teacher is a member of teachers' association by paying 1% of his salary; b) the secretaries of state and district units shall be whole time workers of the associations and the association will be responsible for their salaries during their absence from schools; c) the professional efficiency of teachers will be the responsibility of the association.

SOCIAL EDUCATION

425 BHOLA H S: Some guidelines for planning training courses. Indian Journal of Adult Education 1969, 30(9), 5-9.

The main suggestions are: 1) collecting information regarding a) educational background, b) age, c) rural vs urban residence, d) membership of community groups, and e) occupational experience of the prospective trainees; 2) seeking the help of local officers in departments like agriculture and animal husbandry, teachers, local leader etc. for training purposes; 3) preparing a comprehensive list of tasks that the trainees will have to perform as part of their day-today work; 4) analysing the types of learning expected and providing for each of those if the objectives of training should so demand; 5) selecting the content material to be taught in the classroom in accordance with the information, attitude and performance objectives to be achieved as previously decided upon; 6) formulating training objectives in the light of available time; 7) using appropriate audio-visual aids and developing suitable reading material; 8) adopting objective procedures to find out the amount of learning and to get some feedback from the trainees about the content of the course and the methods of training followed, and making provision for follow-up training which may take the form of on-the-job training.

SOCIAL SERVICE

426 VARKI K V: National and social service for students. Vyayam 1969, August, 9-15.

The importance of National and social service (NSS) for students is stressed. The programme should be introduced on voluntary basis and as far as possible, be related to the teaching work of the institutions. The programme can be organized throughout the year after study hours or on holidays, and during vacations and intensive programme for a month or so can be undertaken. Various activities that could be undertaken during the working days as well as during the long vacations are enumerated. The following measures have been suggested for carrying out the programme in educational institutions: 1) deciding a project on the basis of genuine needs of the community and the interests and competence of the participants; 2) mobilising the energies of youth to participate in the programme; 3) a clear statement of objectives to enable the students to set goals and work towards their achievement; 4) associating students with the planning and organization of the programme at all stages; 5) personal influence of staff by exemplifying in their life the values which they advocate; 6) maintaining co-ordination with various service agencies in the fields like community development, social welfare and cooperation; 7) a close liaison between government agencies, Zilla Parishads, Panchayats, and voluntary agencies like Bharat Sevak Samaj, Y.M.C.A. and Y.W.C.A.; 8) concentrating on a select number of pilot projects in those institutions which have the experience, leadership and resources.

SOCIO-ECONOMIC STATUS

427 GAUR S D, MARWAH S M: Socio-economic aspects of medical students at Varanasi. Indian Journal of Medical Education 1969, 8(4), 210-14. 7 ref.

An analysis has been made of the following socio-economic aspects of 193 male and 52 female medical students at Varanasi: 1) place of origin and religion; 2) age and sex distribution; 3) marital status; 4) occupation of parent/guardian; 5) family size; 6) per capita monthly income; 7) monthly expenditure; 8) freeships and scholarships; 9) addictive habits; 10) hobbies. The major findings are: 1) majority of the students belonged to large-sized families with poor socio-economic status; 2) most of the students were from U.P. though the university is a central university with all-India admissions; 3) most of the students were unmarried; 4) comparatively the females were younger than the males and they came from better class families; 5) male students were poorer academically than females; 6) addictive habits were very negligible; 7) the students had quite a few hobbies in spite of economic stress; 8) the average expenditure of a student is much more than the average per capita family income. A reasonable financial help to needy students would be essential for raising the standards of medical education.

SPECIAL EDUCATION

428 INDIA. COMMITTEE ON UNTOUCHABILITY, ECONOMIC AND EDUCATIONAL DEVELOPMENT OF THE SCHEDULED CASTES AND CONNECTED DOCUMENTS: Report. Delhi, Manager of Publications, 1969, XXIV, 431p.

Part III of the report deals with education. According to 1961 census, the percentage of literacy among the general population and that among the scheduled castes are 24 and 10.27 respectively. The committee has urged that this wide gap should be narrowed down. At the primary stage, the Committee has recommended provision of mid-day meals, free supply of books, stationery and dress, adequate schooling facilities, making teachers responsible to watch over the attendance, enlisting the services of gram sevaks, panchayat presidents etc. to increase the enrolment. The problem identified with regard to middle and secondary education are: 1) lack of schooling facilities and hostel facilities; 2) absence or inadequacy and delay in payment of stipends; 3) poverty, ignorance and apathy of parents. The Committee has recommended suitable measures. Some of the recommendations made with regard to postmatric education are: 1) income limit of parents/guardians should be raised to Rs.1000/- p.m. for grant of scholarships; 2) the rate of scholarship prescribed by the central government should be followed by all State governments and delay in payment should be avoided; 3) one failure in the case of general education and two failures in the case of technical education should be condoned for grant of scholarships; 4) scheduled caste students should be permitted to take up additional vocational training, such as typing, stenography etc., to provide them additional employment opportunities; 5) special coaching as a remedy for the low standard of scheduled caste students; 6) medical aid; 7) all State governments should implement the central government's recommendations in regard to reservation of seats, relaxation of age limit etc. for technical education. The Committee also has recommended several measures with regard to the following areas: 1) overseas scholarships, sainik schools, public schools, ashram schools, hostels and girls' education.

STATISTICS

429 INDIA. MINISTRY OF EDUCATION: Education in universities in India, 1963-64 - a statistical survey. Delhi, Manager of Publications, 1969. ii, 196p.

Chapters 1 & 2 present general survey and statistical survey respectively of the progress of university education. 47 statistical tables are presented under the following heads: 1) Universities in India - jurisdiction, type, faculties and medium of instruction; 2) number of university teaching departments and colleges; 3) number of university teaching departments by type of education; 4) number of colleges by type of education; 5) colleges for general and professional education by courses; 6) enrolment in university teaching departments and colleges; 7) enrolment by type of education; 8) enrolment by standard (14 tables); 9) intake capacity in professional courses in universities and colleges; 10) number of foreign students in India, country-wise and subject-wise (2 tables); 11) number of teachers in university teaching departments and colleges; 12) number of teachers by type of education; 13) pay scales for teachers in university teaching departments; 14) number of teachers in university teaching departments and colleges by salary groups; 15) examination results-standard-wise and detailed break-up (12 tables); 16) income of the universities and their colleges; 17) expenditure of the universities and colleges; 18) statistics of evening colleges/courses; 19) enrolment and number of teachers in evening colleges/courses (2 tables).

430 ALTBACH P G: Student politics and higher education in India. (In Altbach P G. Turmoil and transition - higher education and student politics in India. Bombay, Lalvani Publishing House, 1968. 17-73)

The history of student movement in India is traced and it is pointed out that student movements and organizations have shifted from the value orientation which was very strong during the independence struggle to norm orientation aimed at redress of specific grievances in the post-independence period. It is also pointed out that students active in direct action campaigns (especially in the post-independence period) are more frequently from lower social classes. An analysis of 280 student strikes and demonstrations revealed that demands relating to examinations, grievances against administration of educational institutions, protest against the police and other government functionaries are some of the direct causes for student unrest. Regional and institutional differences have been identified in the patterns of these student upheavals. The other underlying causes of student indiscipline perceived are: 1) declining standards and dissatisfaction with campus conditions; 2) the economic uncertainty and bleak employment prospects; 3) immaturity of students. The significance of the Indian student politics to other developing nations is discussed.

431 BHATTACHARYYA N C: Student unrest. Bulletin of the West Bengal Headmasters' Association 1969, 18(6), 187-92.

Student indiscipline may arise out of genuine student grievances or it may be politically motivated and engineered by political parties to achieve their own ends. Sympathetic understanding of students' problems with a view to solving them and engaging students in social and creative activities may be useful in tackling the first category of student indiscipline. In dealing with the second type of indiscipline where students turn violent indulging in destruction of property, the police should be given freedom to take adequate measures in defence of public law. The poor moral standards have also been stated to be responsible for the student indiscipline.

432 MATHAI P: Why student unrest. Christian Education 1969, 19(2), 14-16.

The factors contributing to student unrest are: 1) lack of proper leadership; 2) diminishing employment opportunities; 3) a sense of frustration among students; 4) general loss of idealism. The remedial measures suggested are: 1) restoring the leadership of teachers; 2) upgrading the teaching profession and ensuring a reasonable teacher-student ratio in the classroom; 3) ensuring adequate employment opportunities; 4) depoliticization of the educational institutions and strengthening the academic atmosphere; 5) improvement of amenities in educational institutions; 6) creating a spirit of idealism among the youth through moral and religious instruction; 7) developing closer mutual contacts between teachers, pupils and parents.

433 SHILS E: Students, politics and universities in India. (In Altbach P G. Turmoil and transition, higher education and student politics in India. Bombay, Lalvani Publishing House, 1968. 1-13).

A similarity is identified between the students' participation in the Indian nationalist movement and the post-independence student upheavals, namely hostility against existing authority. However, the present student agitations it is pointed out, fail to become a movement seeking reforms or changes of the existing systems; they seek correction of particular grievances. Since many of the underlying factors of student agitations are still unknown, it is observed that dispassionate and meticulous reconstruction of disruptive actions shortly after they have occurred would be very valuable. The following suggestions are given to minimise the student unrest: 1) the improvement and strengthening of the police in the prevention, confinement and repression of student disorders; 2) improvement of material amenities and facilities, improvement of quality of teaching and intellectual environment as suggested by the Education Commission; 3) patience and tact on the part of senior administrators and academic staff; 4) continuous scrutiny by vice-chancellor and registrar over their administrative staff and a firm insistence on courtesy and consideration towards students.

STUDENT UNION

434 JOHN V V: Student unions, the anatomy of futility. Times of India 2 September 1969, p.6, Cols. 3-5, 7. 1800 words.

The important role that students' unions could play as a source of intellectual stimulation and as a training in responsibility is pointed out. Instead of entering into agitation, students' unions, it is urged, should debate regularly public issues, including the functioning of the educational institutions of which the unions are a part. It is observed that until 1942 there was a debating tradition in colleges and universities, that students' unions entered into independence struggle after 1942, and that the debating tradition has not been revived after independence. It is suggested that the debating tradition could now be revived by closely associating it to programmes of student participation in decision-making. The following suggestions are also made: 1. All students should be obliged to become members of the students' union because unions could be an effective agency of self-education. 2. Those students who have remained in the university for more than 4 years should be debarred from becomong office-bearers of the unions.

TEACHER STATUS

435 SINGH L C: Study of status of elementary school teachers. Quest in Education 1969, 6(3), 131-7.

A study of the status of elementary school teachers was undertaken through a questionnaire covering the following aspects: 1) general information; 2) professional status; 3) social status; 4) economic status; 5) conditions of work. The questionnaire returns from 725 male and female teachers from both rural and urban areas were analysed. The findings are given under each of the above mentioned areas of status. About half of the teachers perceived their over-all status in the society as satisfactory. The following common suggestions were given by teachers for raising their status: 1) better emoluments paid in time; 2) nationalisation of the elementary education; 3) posting of teachers near their homes; 4) provision of in-service education facilities; 5) free school education and more scholarships for higher education for the children of teachers; 6) all facilities which the central government employees get should also be provided for teachers; 7) promotions should be according to ability; 8) good libraries and reading room facilities for teachers; 9) fixed workload of teachers; 10) mid-day meals for pupils of schools; 11) concrete measures by the government for the improvement of teacher status.

TEACHERS

436 SHARMA R D: Sāmājik krānti kā agradūt mādhyamik vidyālay kā śiksak evam uskī prabhāvotpādaktā (= Effectiveness of the secondary school teacher, the pioneer of social revolution) ∠ Hindi_/ Rajasthan Board Journal of Education 1969, 5(2), 42-50. 13 ref.

The role of the secondary school teacher as the pioneer of social revolution is important for raising the country to the level of the developed countries. In order to fulfil this role successfully the teacher should understand the expectations of society in general and students in particular and his responsibility towards them. The effectiveness of a teacher with regard to his role has been discussed and the scale, designed by Biddle and Ellena (Biddle B J, Ellena W J: Contemporary research on teacher effectiveness, New York, Holt. Rinehart and Winston. 1964) to assess the success of his performance has been presented. All attempts to assess the success of teachers' effort in this direction have not yet been fully successful because of subjective elements; since students are also influenced by factors other than the school, it is difficult to assess exactly the part played by the teacher.

437 SRIVASTAVA S: Professional growth among teachers. Haryana Journal of Education 1969, 2(3), 53-9.

The history of professional growth of teachers in India has been outlined. The professional growth of teacher is reflected in his improved classroom practices, his willingness to change, his working relationship with his colleagues and children and his overall efficiency as a successful teacher. The professional efficiency of the teacher must be adjudged on the three basic aspects of life i.e. professional, social and personal adjustments. Professional adjustment can be achieved through - a) continuous systematic learning after the formal course is over, b) self appraisal with the help of techniques like rating scale, check list, students' performance or opinion or questionnaire surveys, c) experimental projects, and action research (careful try-out of new approaches, development projects, institutional planning etc.), d) professional readings, and in-service activities. The most important aspect in making social adjustment is to develop improved inter-personal relationship with the head of the institution, fellow teachers, students and the community. The teacher should develop emotional stability since mental health is an integral part of the job itself.

TEACHING METHODS

438 BIR SINGH: English teaching, students' reading in the classroom. Naya Shikshak (Teacher Today) 1969, 11(4), 88-91.

The College of Education, Gwalior organised a programme of criticism lessons in December 1968. During the programme the following difficulties were encountered with regard to teaching reading in English language: 1. If the teacher asked all the boys to read, some of them presented very bad models which might be copied by other students. It was suggested that weak students should not be allowed to read aloud during the regular class periods, but they should be given additional coaching. Another suggestion was that the class should be divided into many groups and each group should be given practice by a good reader. 2. The practice of giving drill for the whole class with regard to difficult words and patterns did not yield the desired effect; besides, the adjacent classrooms were disturbed. It was suggested that individual drill be given to 3 or 4 students after which all would join together for a group drill. 3. While practising, it was observed that students were unable to reproduce the complete sentence at a stretch when it was long. It was suggested that students should first be given drill in the last word or phrase and then it should be gradually extended until the whole sentence was complete.

439 GUPTA B D: Teaching of sociology (In Shah A B. Modernization of university teaching, teaching of natural and social sciences in India. Bombay, Nachiketa Publications, 1969. 101-15)

The following aspects are considered: 1) structure and the general importance of the study of sociology; 2) institutional background and the place of the teaching of sociology at the university level; 3) organization of the teaching of sociology in India; 4) analysis of curricula; 5) methods of teaching; 6) handicap of the teachers; 6) examinations; 7) research. The following recommendations are made: 1) sociology teaching should be value-oriented instead of merely fact-oriented; 2) teaching and research should be integrated; 3) instead of neutral techniques suitable for synchronic studies, diachronic methods should be utilised in Indian sociology; 4) in the courses in sociology, various aspects of the country's social structures should be considered and compared with those of other countries; 5) teaching load of the teachers should be reduced and more emphasis should be placed on their research work; 6) close cooperation between universities and government and semi-government research organizations should be developed.

440 JOHRI B M, TANDON S L: Role of basic researches in biology and new trends in biology teaching. School Science 1969, 7(1), 36-46. 16 ref.

The importance of basic researches in the teaching of biology at the school level has been discussed. The teaching methods as well as the revision of curriculum should be based on basic researches. The various communication channels for transmission of recent findings and their impact to the teachers and pupils have been pointed out. In the development of new curricula and the keeping of existing ones up to date, there is a need for identifying the organisms which are most suitable for teaching biology in any particular geographical region. Some of the suggestions are: 1) teaching biology by inquiry and investigative methods; 2) adopting a broad-based syllabus which may include both the modern and traditional topics; 3) conducting the course in biology by actual experimentation and co-ordinating the lecture and laboratory work; 4) making use of teaching aids like 8mm silent films and sound films and production of apparatus by commercial firms in consultation with biology teachers; 5) using objective and thought-provoking type of questions for the evaluation of students; 6) arranging in-service refresher courses for teachers.

441 PARSHAD K: Other side of the medal - teaching English through structural approach. Haryana Journal of Education 1969, 2(3), 60-5, 69.

The structural approach to teaching of English is based on the belief that the student needs a command of some 275 structures and a controlled vocabulary of some 2,500 methodically selected words to acquire a working knowledge of English. The drawbacks of the structural method have been discussed: 1. The teaching process is not real and natural since it is an improvised teaching situation with improvised material. 2. It is not a powerful tool to evoke thoughts and sensations in the child. 3. The syllabus does not reflect the life and thought of the student or his environment. 4. It invalidates the child's curiosity by curbing his desire to express and talk. 5. It is not based on phonetics and does not help in correct sound and fluency of speech. 6. The system does not evoke interest in the child for the language. 7. It fails to recognize that the child is the centre of the learning activity. 8. There is a strong resistance on the part of the child to accept new graded structures. Though the supporters of this method hold the view that it is the best method to teach grammar as the use of structures gives a practical knowledge of grammar, it has been contended that anyone who can speak and talk in a language has a practical command of its grammar, without a theoretical knowledge of the structures. Observing that annual written examination in English especially for elementary classes should be avoided, a joint Board of Examiners, including teachers and inspectors for oral assessment has been recommended.

442 SIVADASAN PILLAI K: Workbooks in the teaching of mathematics. Mathematics Education 1969, 3(3), 104-7.

Workbooks containing a set of problems to be solved by students have become popular for teaching mathematics in Kerala since 1966-67. The following are some of the findings of a questionnaire survey conducted among 250 mathematics teachers: 1) more than 60 percent of the respondents use work books; 2) workbooks are more popular in urban areas than in rural areas; 3) private schools use them more frequently than the government schools; 4) the work books are used for giving home assignments, for revision work towards the end of each unit, for giving tests, etc; 5) the majority of the teachers prefer the unit-wise arrangement which is followed in most workbooks; 6) lack of time to go through these books and inability of some children to buy these books have been stated to be the reasons for not using these books by some teachers; 7) most teachers favour inclusion of sketches and graphs in the workbooks; 10) some of the general suggestions offered by teachers are: a) pricing the books moderately, b) providing sufficient working space, c) giving clues for solving difficult questions, d) using these books for internal assessment, e) popularising the work books among all mathematics teachers and appointment of a committee to prepare workbooks for all classes.

443 SONI B R: Formalism in the teaching of algebra in school - its causes and remedies. Mathematics Education 1969, 3(2), 68-73.

Lack of spontaneity among students in putting into practice the secured knowledge and skills, and lack of scientific outlook have been attributed to the formalism in the teaching of algebra. The main causes of formalism are: 1) absence of any link between the school course of elementary algebra and arithmetic or higher mathematics; 2) teaching of the various concepts separately under different sub-heads like directed numbers, simultaneous equations, indices, surds and elimination without showing the developmental pictures of the various concepts; 3) teaching of algebraical transformations without indicating their significance; 4) quick introduction of a large number of concepts to unprepared children; 5) absence of direct and inverse relationship between elementary algebraical concepts and corresponding arithmetical concepts; 6) passivity in teaching. The suggested remedies are: 1) initiating the study of algebra from the 5th class; 2) framing an integrated programme of arithmetic and algebra for V-VIII classes; 3) slow introduction of elementary concepts and spreading their study through a longer period; 4) concentrating on the study of equation in V-VIII classes and on the concept of functions in IX-X classes and starting a preparatory course in function from the 5th class; 5) adopting the activity method of teaching which stimulates active thinking among students in understanding the concepts and solving problems.

444 SRINIVASAN K S: Study on the use of field trips in upper primary schools in T. Nagar range, Madras. Tamil Nadu Education 1969, 3(3), 45-50.

The purpose of the study is to assess the use of field trip as a teaching device with particular reference to the teaching of history. Copies of a questionnaire regarding the use of field trip in the teaching of upper primary schools, were sent to the heads of 14 schools selected as a sample. All except three schools had conducted field trips for history subject alone. They felt the need to organise such trips subject-wise. The main suggestions given with regard to planning and conducting field trips are: 1) conducting more field trips within the city and outside; 2) planning the trips according to the syllabus and specific topic in history relating to a particular standard; 3) evaluating the trips more effectively and comprehensively; 4) maintaining subject-wise central field trip files.

445 UDANI P M: Role of hospitals in teaching of preventive and social paediatrics. Indian Journal of Medical Education 1969, 8(3), 149-54.

Describes the following teaching methods which are in practice at the Paediatric Centre, J.J. Group of Hospitals, particularly in relation to emphasis on preventive and social aspects of paediatrics: 1) intensive case discussions in the in-patient department;

2) clinico-social conferences for discussing various diseases of children; 3) neonatal conferences consisting of presentation of clinical data in brief and detailed data on the social, economic, environmental and cultural aspects of the family; 4) discussions at the Maternal and Child Health Centres on the various problems of pregnant mothers, particularly affecting the child. Various difficulties in the organization of the teaching of preventive and social pediatrics are enumerated.

TESTS AND MEASUREMENTS

446 CHAWLA T R: Evaluative study of new culture-free intelligence test (Kit : Exp). Journal of Psychological Researches 1969, 13(2), 74-6. 12 ref.

The Khan intelligence test: experimental form (Kit : Exp) is designed to measure development levels of normal children as well as children and adults handicapped by verbal and visual defects. A study was undertaken: 1) to find out the test-retest reliability of Kit : Exp and 2) to validate this test with Wechsler intelligence scale for children (WISC). The test was administered to 154 children (82 boys and 72 girls of mean age 117 months) twice with a gap of 2 months, then the WISC was administered for estimating validity coefficient of the test. The findings of the present study gave convincing evidence that the Kit : Exp provided scores which were similar to those of WISC. The test-retest reliability was also found adequate. Hence it is suggested that Kit : Exp could be fruitfully employed for the assessment of intelligence.

447 DATTA S: Empirical study on the comparison of different methods of obtaining single-trial reliability estimates. Journal of Psychological Researches 1969, 13(2), 67-70. 9 ref.

A study was conducted to compare 7 methods of estimating reliability under less than perfect theoretical conditions and to obtain empirical support in favour of the methods requiring less computations. Data were collected from two samples of 200 students, each selected from grade 8 - boys and girls - of higher secondary schools in Tirupura. Word meaning test in Bengali which formed part of the Holzinger - Crowder unifactor tests as adapted and standardised by the author was administered. The test aimed to measure 'verbal ability' and the factorial validity was reported to be high. The reliability of the test was determined by utilizing the following 7 methods: 1) odd-even split-half; 2) Guttman formula 'L4'; 3) Raju-Guttman formula; 4) Kuder - Richardson formula '20'; 5) Kuder - Richardson formula '21'; 6) Saupe formula'R20*'; 7) Saupe formula 'R20'. The two samples showed no significant differences in means and standard deviations for the total test and the split-halves. The two halves had equal variances for the boys unlike in the case of the girls. It was observed that although, the basic assumptions underlying the use of some of the techniques were not satisfied in the present test situation, the variations in the obtained coefficients were small. With regard to computational ease, short-cut techniques of Saupe appeared to be superior to other techniques which rest on much restrictive assumptions.

VOCATIONAL AND TECHNICAL EDUCATION

448 BANERJEE D: Technical education at the university level. Engineering News of India 1969, 21(2), 83-7. 7 ref.

The following suggestions are given: 1) technical education should be planned in accordance with manpower needs of the country; 2) in framing curriculum, due weightage should be given to fundamentals without losing sight of the requirements of the industry; 3) course duration should neither be too short nor too long; 4) expansion of educational facilities should take into consideration the shortage of qualified teachers; 5) there should be flexibility in the pattern of courses so as to facilitate change over from one stream to another; 6) the course could be split into 3+2 years: the first 3 years leading to B.Sc (Technical) degree, and the subsequent 2 years leading to a professional degree - B.E.. The first degree holders can be employed in engineering management, sales, cost accounting, supervision, shop-floor work etc. B.E. degree holders can be employed in engineering planning, design and development; 7) pure science graduates with one year extra course in engineering sciences and practice may be admitted into the professional degree course.

449 RAO V K R V: Progress of technical education. Searchlight 26 September 1969, p.4, Cols. 3-6; 27 September 1969, p.4, Cols. 3-5; 30 September 1969, p.4, Cols. 3-5; 1 October, p.4, Cols. 3-5. 5000 words.

The author, who is the Union Minister for Education and Youth Services, in his address to the 20th meeting of the All India Council for Technical Education stressed the need for consolidation of technical education and improving its quality. The proposed following programmes, it has been mentioned, would achieve the desired result: 1) in-service training of teachers, in addition to summer institutes, for faculty development; 2) 28 curriculum development groups for degree and diploma courses that would be set up at selected centres. The following suggestions have been given: 1) carefully planned scheme of industrial experience for teachers at selected industrial organizations; 2) cooperation between polytechnics and industries which are located near each other, in organizing sandwich courses to produce the correct type of technicians. It is reminded that in designing curricular offering to suit various specializations, the technician's horizontal mobility should be ensured in addition to facilitating his vertical mobility. It has been agreed to set up a high power committee consisting of experts in technical education and industry to examine the entire system of polytechnic education.

450 SEN B: Philosophy of technicians' education. Manpower Journal 1969, 4(4), 27-41. 6 ref.

Clear understanding of the functions of the technician and of the required skills and qualities to be imparted to him are the prerequisites for planning the curriculum for technicians' education. The education component is more important than the training component to produce a worthwhile technician. Nevertheless the training component is comparatively more important than is necessary for a degree programme. The following basic structure of education is proposed: A. General subject group. B. Science subject group. C. General technical subjects - i) drawing, ii) applied mechanics and theory of structure, iii) materials, iv) hydraulics, v) basic civil engineering, vi) basic mechanical engineering, vii) basic electrical engineering, viii) basic survey, ix) workshop technology. D. Special technical subjects group - theoretical knowledge necessary for a particular field of specialization. E. Workshop practice. Theoretical courses should be backed by laboratory practices. Training component of any technical education consists of two parts: a) institutional training; b) industrial training. Industrial training includes both environmental acclimatization and job orientation. The most important part of the training is job orientation in industry after the completion of the institutional studies. The duration of job orientation may be for one or two years. Hence, there is need for complete cooperation from industry.

451 TRIVEDI R S: Vocationalization of schools. Quest in Education 1969, 6(3), 138-41.

Vocational schools require an administrative handling altogether different from non-vocational schools. The following considerations should be kept in view while starting vocational schools: 1) industrial and agricultural potential of the area; 2) review of mechanical jobs and allied skills; 3) a five-year plan of industrial, agricultural development of the area; 4) anticipated demand of job-skills in the existing factories and farms. Minimum requirement for admission to vocational schools should be junior elementary school certificate. The following are the curriculum areas: 1) work-orientation where learning of theory should evolve from practice; 2) mother-tongue and English; 3) elementary knowledge of science and mathematics. Facilities should be provided to vocational school students for further education - both technical and general. The cooperation of nearby industries and agricultural agencies should be sought in framing the syllabus, provision of facilities for apprenticeship and financial help. A centrally located school should provide for complex of villages. The school could also run part-time classes to train adult workers in modern job requirements.

WASTAGE AND STAGNATION

452 GOKHALE D N: Summer school - a remedy on stagnation and wastage S.S.C.E. by parts; Subject-wise promotions. Maharashtra Educational Journal 1969, 17(11), 298-300; 17(12), 313-17, 318-29.

The Committee on Examinations appointed at the Mahabaleshwar Seminar, in May last, by the Maharashtra State Federation of Headmasters' Associations suggested the following reforms in order to reduce wastage and stagnation: 1) organising summer schools for the failed students and promoting them on the basis of the marks obtained. in the examination held at the end of the session; 2) allowing students to appear for the S.S.C. examination by parts i.e., first part in X standard and second part in XI standard; 3) introducing a scheme of subject-wise promotions. All the proposals are described in detail. The organizational set up required and other changes to be effected in accordance with the suggested reforms have been given in detail.

453 **KALE J D**: Retention rates in education. Progress of Education 1969, 43(12), 416-22.

Retention rates at the primary and secondary stages of education for the years 1959-60 to 1965-66 in Gujarat have been computed by the method of curve fitting. The regression analysis carried out enabled to get the retention rates for earlier years for which data were not available. The sets of retention rates worked out for boys and girls separately bring forth the following results: 1) the retention rate among boys in primary stage (I-VII) was about 25% and among girls about 18%. While the retention rate in the case of boys was stagnant, in the case of girls, it was slowly increasing; 2) the retention rate among boys in secondary stage (VIII-XI) was around 62% and was on decline whereas among girls it was around 60% but showing an upward tendency. The small proportion of retention rate at primary stage stresses the need for consolidating the expansion of education, in subsequent years after the enrolment in standard I.

454 **SAPRA C L**: Wastage and stagnation in elementary schools. Naya Shikshak (Teacher Today) 1969, 12(1), 44-56, 4 ref.

Definition of wastage and stagnation and the various methods of measuring these phenomena are discussed. The combined rate of wastage and stagnation calculated for the years 1950-57, has been 78.35%. The rate is highest in class I, which decreases as pupils move to higher classes. The rate is higher among girls. The following causes are attributed: 1) socio-economic - poverty and low social status of parents; 2) educational - wastage caused by stagnation, absence of schooling facilities, poor school environment, faulty admission policy; 3) miscellaneous - death of a parent, illness of pupil, heterogeneity in the age-composition of pupils in a class, irregular attendance. The following remedial measures are suggested: 1) survey, to be made by teachers, of children of school-going age in the neighbourhood of the school and reminding the concerned parents to send the children to school; 2) restricting the admission to the first 2 or 3 months of the academic session; 3) trying out the method of 'ungraded unit' as suggested by the Education Commission (1964-66); 4) introducing play-way techniques of teaching to attract children to schools; 5) providing financial assistance to needy children; 6) adjusting school hours and vacations to meet the economic needs of the community; 7) remedial teaching for weak students; 8) improving school-community relations. Adult literacy campaign, appointment of school mothers and women teachers in rural areas are suggested to reduce the wastage and stagnation among girls.

455 KALE B D: Contours of female education and age at marriage in urban India - a district level study. Journal of Institute of Economic Research 1969, 4(2), 34-49.

The crude literacy rates as available from the 1961 census have been considered in studying the relationship of female age at marriage and education in urban India, at the district level. Three hundred and twentyone districts or units for the whole of India have been studied. The main purpose of this note is to bring out the homogeneity with regard to age at marriage and literacy among contiguous districts, cutting across inter-state boundaries. It is observed that the urban population along the entire western coast, north-eastern and north-western regions had uniformly a high age at marriage (over 19 years) and also high literacy rate. These regions could be termed as homogeneous regions. The following are the possible reasons attributed for the high literacy rate in these regions: 1) the western coast regions have developed in the past as well as in the present on account of trades and missionary activities; 2) some private institutions such as Nair Service Society in Kerala, Rayat Shikshan Samstha in Maharashtra, Khalsa institution in Punjab, have played important roles in promoting education; 3) the internal and international migratory flows of population have provided motivation for education.

456 KALE B D: Education and age at marriage of females in India. Journal of Institute of Economic Research 1969, 4(1), 59-74.

An attempt is made to pinpoint the relationship of education with age at marriage from the 1961 census data. The method given by Hajnal has been followed in computing the mean age at marriage. In general, the age at marriage in urban areas is higher by 1.5 to 3.0 years than that in rural areas of different States. In none of the States the mean age at marriage in urban areas is less than 15, the minimum fixed by the law. However, in the rural areas in seven States, the mean age at marriage is less than 15. It is found that differences in the spread of education seemed to explain the regional variations in age at marriage to a very large extent, and that larger the number of years a girl spends in the school the more likely it is that she would be married at a higher age. It is concluded that if the literacy rate for females aged 10 years and over could be raised to 60% the mean age at marriage would rise above 20 and to above 21, if the literacy rate could be raised to 70%. In terms of schooling if the average number of school years completed could be raised to 4 or 5 years, the age at marriage is likely to rise above 20 or 21 years. As raising the age of marriage has profound implications on the birth rate, it is suggested that attention should be given to women's education.

457 RAI S: Female education in villages. Social Welfare 1969, 16(6), 12.

In view of the poor state of female education in villages the following remedial measures have been suggested: 1) starting separate schools for girls or staffing the schools with equal number of male and female teachers; 2) keeping single teacher schools under the charge of female teachers; 3) providing a two-teacher school with a married couple or utilising the services of the wife of the teacher in the form of school-mother, in case she is not qualified to work as a teacher; 4) increasing the age limit for recruitment of women teachers to attract back trained women who have earlier given up their jobs to devote themselves to their families.

WORKERS' EDUCATION

458 Pedagogic aspects of workers' education. Workers' Education 1969, September, 122-5.

The four stages followed in planning a training programme are: 1) formulation of syllabus; 2) working out details; 3) preparation of time table; 4) drawing up of work-chart and check-list. After planning the programmes to ensure effective teaching particularly in unit level classes, the following two rules: a) the teacher must have knowledge, b) the class must have desire to learn, are combined with the following basic principles: 1) ultimate objective of developing the mind and character of the worker by realising a series of immediate objectives; 2) planning the teaching by taking into account the factors like accommodation, class arrangement, lighting, seating, aids to be used, etc; 3) preparing a systematic lesson plan; 4) utilizing the methods like lecture, discussion, debate, seminar and buzz session to sustain trainees' interest in the class; 5) making maximum use of audio-visual aids to add interest, to save time and make teaching-learning process simple and effective; 6) offering opportunities to the class to be mentally active through techniques of questions and discussions; 7) following simplicity in teaching; 8) adopting humane approach; 9) checking from time to time the extent to which the teaching or the knowledge has been absorbed by the class through questions and tests like: a) true or false, b) cluster true or false, c) multiple-choice.

459 SINGH J: Literacy for industrial workers. Education Quarterly 1968, 20(2), 21-2.

Industrial workers should be imparted functional literacy, related losely to their respective jobs. The reading material should be based on their existing knowledge and familiarity with the technical terms of the professions in which they are working. Modern techniques supplemented with audio-visual aids should be evolved for developing quick methods of teaching to read and write. Besides, lessons should be in the spoken language of the workers. Educated or even semi-educated workers would be the most suitable worker - teachers. They would correlate their reading and writing to the professional needs of the workers. Education of workers should be made a statutory obligation on the part of each industry and profession. This would imply that the working hours in each industry are so arranged that the education of employees is a part of the schedule. A tripartite agreement to this effect should be made between the employers, the workers and the government.

List of Periodicals Abstracted

Bihar Information: V 17, No 13
Bulletin of the Ramakrishna Mission Institute of Culture: V 20, No 4
Bulletin of the West Bengal Headmasters' Association: V 18, No 6
Chemical Age of India: V 20, No 7
Christian Education: V 19, No 2
Education: V 48, Nos 6, 9
Education Quarterly: V 20, No 2
Educational India: V 35, No 11-12; V 36, Nos 1, 2
Educational Review: V 75, No 9
Educational Trends: V 4, No 1
Engineering News of India: V 21, No 2
Haryana Journal of Education: V 2, No 3
Indian Journal of Adult Education: V 30, Nos 7, 8, 9
Indian Journal of Applied Psychology: V 6, No 2
Indian Journal of Experimental Psychology: V 3, No 2
Indian Journal of Medical Education: V 8, Nos 3, 4, 5
Indian Journal of Pharmaceutical Education: V 3, No 2
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Journal of Educational Research and Extension: V 6, No 1
Journal of the English Language Teaching: V 4, No 3
Journal of Institute of Economic Research: V 4, Nos 1, 2
Journal of Psychological Researches: V 13, No 2
Maharashtra Educational Journal: V 17, Nos 11, 12
Manpower Journal: V 4, No 4
Mathematics Education: V 3, Nos 2, 3
Modern Review: V 124, No 7
NIE Journal: V 3, No 6
Naya Shikshak (Teacher Today): V 11, No 4; V 12, No 1
Prachya Prabha: V 41, No 7
Progress of Education: V 43, No 12; V 44, Nos 1, 2
Publishers' Monthly: V 11, No 8
Quest in Education: V 6, No 3
Rajasthan Board Journal of Education: V 5, No 2
School Science: V 7, No 1
Seminar: 1969, No 120
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Social Studies Teacher: V 6, No 2
Social Welfare: V 16, No 6
Tamil Nadu Education: V 3, No 3
Teacher Education: V 3, No 3
Teaching: V 42, No 1

Technical Manpower Bulletin: V 11, No 4
University News: V 7, Nos 7, 8, 9
Vyayam: 1969, August
Workers' Education: 1969, September
Yojana: V 13, No 14

Newspapers:

Amrita Bazar Patrika: 26 Aug
Economic Times: 22 Aug
Free Press Journal: 19 July
Hindu: 24 July; 1 Aug
Mail: 19 July; 10 Sept
Searchlight: 13 July; 26 Aug; 26, 27, 30 Sept; 1 Oct
Statesman, Calcutta: 10 July; 18 Aug
Times of India: 4, 24, July; 2, 23, 24 Sept

SPECIAL SECTION

TEACHER EDUCATION - I

A70 ADAVAL S B: Teacher education (In National Council of Educational Research and Training. Third Indian Year Book of Education. Delhi, the Council, 1968. 136-49).

The paper presents a survey of researches on teacher education. A brief description is given of the two doctoral works which trace the historical development of teacher education in the States of Maharashtra and Mysore. Other studies on teacher education are classed under the following 4 heads: 1) attitudes; 2) economic, social and personal problems of teachers; 3) qualities required for success and actually found in school teachers, selection and evaluation of school teachers and student-teachers; and 4) main interests and pursuits of teachers. 1. All the studies indicated that the attitude of teachers to their profession is not favourable. The reasons for taking up this profession are generally its being considered a respectable profession, interest in children, opportunities for life-long learning, promise of leisure etc. Private tuition is favoured by a considerable number. Dissatisfaction with pay scales and status in society are also mentioned. 2. Majority of teachers suffer from financial worries. Other problems are: social, psychological and professional. The headmasters have problems of shortage of teachers, interference of management etc. In general, the socio-economic condition of teachers at all levels is highly unsatisfactory which is an important cause of the poor quality of teaching. 3. Social, moral and aesthetic interests, intellectual proficiency and professional skills are the necessary qualities for teachers. The need for objective and scientific method of selection for admission to teacher training institutions is stressed. 4. Majority of teachers spend their leisure time in reading, aesthetic pursuits, crafts, hikes etc. Teachers usually do not take part in activities in which they want their students to participate. Many teachers are engaged either in some work to supplement their income, or in preparing for some examination (matric, intermediate or B.A.) This is the reason why many teachers are unable to attend refresher courses, seminars, social service camps etc. Hardly any of them read educational journals.

A71 ALL INDIA COUNCIL FOR ELEMENTARY EDUCATION. STUDY GROUP ON THE TRAINING OF ELEMENTARY TEACHERS IN INDIA: Report. Delhi, Manager of Publications, 1963. 72p. /_ Chairman: Raja Roy Singh_/.

The important recommendations are: 1) giving high priority to the programme of improvement of teacher education at the elementary stage in the remaining period of the Third Plan as well as in the Fourth Plan; 2) adopting special measures like correspondence courses for clearing the backlog of untrained teachers; 3) expansion of training facilities in such a way that the annual output of training institutions would match the annual requirement of additional teachers; 4) appointment of a Study Group in each State and Union Territory to a) work out detailed estimates of the additional enrolment in the elementary schools up to 1975 and the additional teachers required annually, b) assess the size of the backlog of untrained teachers and prepare a detailed scheme for clearing the backlog, c) examine the possibilities of expanding the capacity of existing institutions, d) determine the additional training institutions to be created, e) assess the requirements of teachers for the special categories, e.g. women teachers, teachers for tribal areas, f) work out the estimates of the cost and the phasing of the whole programme. The plans so prepared should be combined for the overall plan of teacher education of the country; 5) adopting the following general principles for the location and planning of training institutions - a) a district should be the unit of planning, b) about four-fifths of the training institutions should be located in rural areas, c) an ideal location for a training institution would be a township with a population between 5,000 and 15,000, d) the institutions should be easily accessible from all parts of the district; 6) the duration of the training course should be two years for these who have completed secondary school, or the higher secondary and for those who have not completed the secondary school, it should be three years which should be divided into two periods - a continuous pre-service training programme of two years followed by an in-service training programme of one year; 7) revision of the existing syllabi of training institutions on the basis of a model syllabus that should be prepared by the National Institute of Education; 8) organizing special in-service training courses for teacher education; 9) developing a nation-wide network of in-service training programmes; 10) increasing the number of extension service centres to 240 at least by the end of the Fourth Plan; 11) establishing State Institutes of Elementary Education; 12) provision of adequate incentives and facilities to elementary school teachers for further education; 13) production of educational literature in Indian languages; 15 creating a permanent organization at all levels which would be responsible for improving teacher education; 15) setting up in every state a State Council of Teacher Education to deal with teacher education at all levels; 16) appointing in every state a

Special Officer (or any other suitable administrative machinery) whose whole-time responsibility would be for the programmes of training institutions; 17) provision of a sum of Rs.20 crores in the Third Plan and about Rs.60 crores in the Fourth Plan for the implementation of this programme.

A72 ALL INDIA COUNCIL FOR SECONDARY EDUCATION: Recommendations on teachers (In India. Ministry of Education. Reconstruction of secondary education. Delhi, Manager of Publications, 1967. 1-11)

Some of the recommendations are - 1956: 1) a committee might be appointed to advise on the training of teachers for higher secondary and multipurpose schools; 2) it was resolved to refer the question of the period of training for the teachers of higher secondary schools and the minimum qualification required of the teachers selected for such training, to the Committee appointed by the Ministry of Education for the examination of the curriculum and the pattern of training in secondary training colleges; 3) regarding the problem of training teachers in vocational subjects, it was decided that, where facilities did not exist for providing practical training in the workshops of technical schools, various alternative measures would have to be devised by the staff of the training college in cooperation with technical and professional experts; 4) the Council welcomed the scheme for strengthening the teaching of science in secondary schools by deputing training college lecturers and secondary school teachers under the Science Teachers' Fellowships Programme to USA, Canada and the UK: 1958: 5) for the training of teachers for practical subjects in multipurpose schools, the training colleges and universities should be requested to include these practical subjects in the regular training programme for the B.ED. or B.T. or L.T. degree course. Special training courses might be organized by the training colleges for diploma holders leading to a diploma in the teaching of specified technical or practical subjects; 1962: 6) the services of the personnel trained in the 9-month course of the Central Institute of English, Hyderabad should be utilized as key personnel in teacher training programme; 1963:7) the scheme of condensed courses of one year duration for existing graduate teachers would help considerably in meeting the shortage of science teachers for the higher secondary classes and the NCERT should evolve a model syllabus for such condensed courses; 8) in-service training should be provided to all teachers and all training colleges should gradually have extension departments for this purpose.

A73 BHATTACHARYAY G C: Plea for development of methodology by the teachers' training college. Educational Miscellany 1967-68, 4(3-4), 80-4.

It has been urged that the teacher-training colleges should take lead in conducting experiments towards improvement of teaching in primary and secondary schools and that the theories which are discussed in a training college should have a practical and experimental bearing, so that the teacher-trainees are inspired to make further improvement in effective teaching and try new methods and approaches for advancement in methodology after leaving the training college. The teacher-educators should demonstrate various techniques, innovations and experiments in teaching like Project Method, Problem Solving, Unit Method and Heuristic Methods before the trainees start teaching-practice. It will be very convenient if an experimental school is attached to a training college so that the teacher-educators can experiment on various techniques in the presence of the trainees. The solutions to the class room problems should be verified before recommending them to the schools. Comparative utility of various techniques like translation method and structural approach of teaching languages should be verified after using them for some time in separate groups of school children. The teacher-trainees should be encouraged and given all help by the teacher-educators to experiment with the various techniques of teaching during teaching-practice.

A74 CHILANA M R: In-service education of primary school teachers-special need, present status and new dimensions. Educational Miscellany 1967-68, 4(3-4), 26-38.

In-service education of primary school teachers is significantly important and it needs special attention. Existing facilities of in-service growth of teachers are not only inadequate, but they are available to only a small fraction of the teacher population. In order to carry out the recommendation of the Kothari Commission regarding universalizing the provision of in-service education to all types of teachers, it is necessary to find out new dimensions of the programme. Important among these dimensions are to provide many types of programme including formal and informal activities, credit and non-credit courses, correspondence services and plans of individual institution growth. To carry out this multitude of activities, it will be necessary to enlist the cooperation of maximum number of agencies concerned with the teachers' growth such as supervisory staff, training institutions, teachers' associations and State Institutes of Education etc. Even the present extension services departments might be reorganized to provide greater benefits. Again, independent centres may be set up with these functions. All these steps will help a lot in promoting academic and professional growth among primary teachers.

A75 CHILANA M R: To step up primary teacher education - basic issues: related proposals. Teacher Education 1969, 3(3), 3-8.

The following proposals have been made while referring to the efforts of other countries in this respect and to the role in this task of different agencies like State Institutes of Education and National Council of Educational Research and Training: 1) raising the level of teacher education; 2) universalizing the provision of in-service education to primary school teachers by introducing a variety of programmes for the purpose; 3) patronizing production of literature on primary education and primary teacher training; 4) establishing centres for the special training of primary teacher-educators; 5) providing necessary facilities, both physical and personnel to primary training institutions; 6) establishment of pilot institutions for preparing primary school teachers; 7) introduction of guidance services to pupil-teachers; 8) improving evaluation procedures in primary teacher education; 9) promoting research in elementary teacher education; 10) evolving a programme of built-in extension for every primary training institution.

A76 COMMONWEALTH EDUCATION CONFERENCE, 2ND, NEW DELHI, 11-25 JANUARY, 1962. COMMITTEE ON THE TRAINING AND SUPPLY OF TEACHERS. Report. (In Commonwealth Education Conference, 2nd, New Delhi, 11-25 January, 1962. Report. Delhi, Manager of Publications, 1962. 33-45)

The important recommendations are: 1) more detailed information about the needs of recipient countries and the resources of donor countries in training teachers should be collected and made available and the countries that have given assistance should consider publishing progress reports on their training schemes. The Commonwealth Education Liaison Unit should coordinate such information; 2) a number of bursaries or training grants should be provided in rural and social education and similar disciplines, as well as in the subjects and courses mentioned at Oxford Conference; 3) special note should be taken of the developing countries' requirements on the training of technical teachers, and priority should be given to strengthening existing departments or institutions which train technical teachers; 4) teachers should have working experience of schools or training colleges in the country where they are studying and emphasis should be placed on training women teachers; 5) arrangements should be made for instituting orientation courses for candidates selected for study abroad; 6) developing countries should consider providing in-service courses organized by visiting teams of experienced teachers and lecturers.

A77 DESAI K G: Evaluation in teacher education. NIE Journal 1969, 3(6), 38-41.

The total evaluation in teacher education at B.Ed. level should consist of evaluation in the following areas: 1. Learning of theory - The essay-type examination should partly be replaced by short-answer and objective tests. In addition to the final external examination, there should be 3 or 4 periodic tests for the internal evaluation. 2. Practical work related to theory - Case studies, experiments in psychology, achievement and intelligence testing, study of educational developments during the Five Year Plans, preparation of teaching aids, statistical analysis of examination results, study of school plant, records, etc. should be assigned to students which should be evaluated on a 5, 7 or 9 point scale. 3. Student teaching - The evaluation of student teaching has to be done by a) the student himself, b) other fellow students observing the lesson and c) the supervisor, keeping in view the objectives of the lesson unit. The external examination should consist of 2 lessons in the two optional subjects offered by the student. 4. Co-curricular activities - participation of student in such activities as talks, debates, symposia, dramatics, exhibitions and other school functions should be evaluated. The external examination should consist of examination of i) theory, and ii) student teaching, while the internal assessment will comprise i) evaluation of practical work related to theory, ii) evaluation of co-curricular activities, iii) periodic student teaching and iv) periodic theory tests.

A78 DHAR K L: Remedial English for teachers - basic considerations. Naya Shikshak (Teacher Today) 1969, 12(1), 23-7.

The following factors have to be taken into consideration: 1) the different scopes of remedial work for trained and untrained teachers; 2) the role and uses to which English is to be put to in India; 3) the need for tackling various age groups of trainees differently because of their different degrees of motivation; 4) to base the remedial work on psychological, pedagogical and linguistic principles of foreign language teaching as well as on the difference between the two language skills - speech and writing. The following programmes of long-range and immediate actions are suggested: I. Long-range view: a) setting up a national coordinating machinery with regard to the teaching of English;

b) improving teacher training programmes and improving curriculum and teaching methods in schools; c) redefining the role of foreign agencies in the teaching of English and teacher training; d) a general survey of English teaching needs of the country. II. Immediate action plan: a) systematization of errors committed by teachers throughout the country; b) building a suitable remedial course accordingly; c) adequate grants from the central government for this purpose.

A79 DIKSHIT S S: Teacher education in modern democracies. Jullundur, Sterling Publishers, 1969, xii, 106p.

The new developments and trends in the field of teacher education in four leading democracies of the modern times - England, France, United States and India - against the backdrop of their traditional systems are presented. It is believed that this would be useful for reorganization of teacher education on sound lines. The following are the 5 chapters in the book: 1. England; 2. France, 3. United States; 4) India; 5. The new horizons.

A80 INDIA. CENTRAL ADVISORY BOARD OF EDUCATION. Recommendations on teachers (In India. Ministry of Education. Reconstruction of secondary education. Delhi, Manager of Publications, 1967. 1-11).

Some of the recommendations made by the Board in its different meetings are: 1959: 1) the training required for the teachers of multipurpose schools should be evolved by experts in particular spheres of technical education and they should work with experts in pedagogy from the training colleges; 2) all heads of departments at the higher secondary stage should be M.As or M.Scs. or should possess a Diploma Certificate from the university indicating their competence to teach at the higher secondary stage, while the others should have undergone B.T. training; 3) a certain number of teachers from different institutions should be deputed for a period of one year to a university for practical training in approved laboratories for science subjects and in the other approved departments for the other subjects. At the end of the course the deputed teacher should either take the M.A. or M.Sc. examination to be held for the regular students or a diploma examination, the details of which should be worked out by the university; 1962: 4) teacher training for secondary schools should be examined as a matter of urgency in consultation with the University Grants Commission with a view to undertaking measures to meet the requirements of secondary schools; 1964: 5) the teachers of science who acquire higher qualification should get suitable increase in their salary and an appropriate machinery should be evolved to ensure the follow-up of the special training given to science teachers; 1965:6) the Board accepted the following recommendations of the Committee on School Education: a) all teacher training institutions should be strengthened and improved which would include reorganization of curricula, establishment of special model schools for practice-teaching, extension work and provision of necessary physical facilities and finances for organizing community activities and other programmes, b) the duration of the teacher training course, which is one year at present may have to be increased.

A81 INDIA. COMMITTEE OF MEMBERS OF PARLIAMENT ON EDUCATION, 1967: Teachers - status and education. (In its Report... National policy on education. New Delhi, Ministry of Education, 1967. 11-13)

Some of the recommendations are: 1) the training of school teachers should be brought within the broad stream of university life and the training institutions should no longer be isolated from the schools. Schools of education should be established in universities. Each State should prepare and implement, on a priority basis, a plan for the expansion and improvement of teacher education at all stages; 2) the academic freedom of teachers to pursue and publish their studies and researches and to speak and write about significant national and international issues should be protected; 3) the improvement in the status of teachers should be accompanied by a corresponding deepening of the awareness of their crucial role in moulding the life and character of the rising generation; they should pursue learning and excellence with dedication.

INDIA. EDUCATION COMMISSION (1964-66): Teacher education (In Report of the Education Commission (1964-66) - education and national development. New Delhi, Manager of Publications, 1966. 67-68, 622-4)

[see Indian Educational Material V.1, abstract no. 190].

A82 **INDIA. PLANNING COMMISSION. COMMITTEE ON PLAN PROJECTS. STUDY TEAM FOR SELECTED EDUCATIONAL SCHEMES:** Report on teacher training. New Delhi, the Commission, 1964. iii. 206p.

A study team was set up to study among other things the teacher training programmes from the point of view of 1) enforcement of compulsory education for the age-group 6-11; 2) expansion of middle/junior, high/senior basic education for the age-group 11-14 and expansion of secondary education, and to make relevant recommendations. The following aspects are covered in the report: 1) objectives of teacher education and trends of development; 2) procedure and preparation; 3) present position, 4) some aspects of teacher education; 5) problems of teacher education; 6) teacher education-suggestions for administration and organization; chapter 8 gives summary of conclusions and recommendations. The appendices give detailed information regarding the following: 1) institutions; 2) trainees; 3) curricula; 4) staff of the training institutions; 5) provision for teacher training programmes; 6) cost pattern and other items.

INDIA. PLANNING COMMISSION. EDUCATION DIVISION: Teacher education in the Fourth Plan (In India. Planning Commission. Planning Group on Education. Steering Committee. Educational development in the Fourth Plan (1969-74) - report of ... New Delhi, the Commission, 1969. 102-116)

[see Indian Educational Material V.4, abstract no. A60]

A83 **INDIA. SECONDARY EDUCATION COMMISSION (1952-53):** Teacher-training (In its Report. New Delhi, Manager of Publications 1965. 134-41, 143)

The recommendations are: 1) there should be only two types of teacher-training institutions a) for those with School Leaving Certificate or Higher Secondary School Leaving Certificate for whom the training period should be two years, and b) for graduates for whom training may be for one year but extended later to two years; 2) graduate teacher-training institutions should be recognized by and affiliated to the universities which should grant the degrees, while the secondary grade training institutions should be under a separate Board appointed for the purpose; 3) training should be given in extra-curricular activities; 4) the training colleges should arrange refresher courses, short intensive courses in special subjects, practical training in workshop and professional conferences, and conduct research work and should have an experimental school for this purpose; 5) no fees should be charged and stipends should be given to students and adequate residential facilities should be provided; 6) only trained graduates with three years of teaching experience should be admitted to the Master's Degree in Education 7) there should be free exchange of ideas between professors in training colleges, selected headmasters of schools and inspecting officers; 8) special part-time training courses should be conducted to meet the shortage of women teachers.

A84 INDIA. STATE EDUCATION MINISTERS' CONFERENCE, 6-8TH, 1963-65. Recommendations on teachers (In India. Ministry of Education. Reconstruction of secondary education. Delhi, Manager of Publications, 1967. 1-11)

The recommendations made in its different meetings are: 1963: 1) immediate steps should be taken to raise the standard and quality of secondary education by raising the period of teacher training to 2 years and including content education in the syllabus; 1964: 2) the headmasters of middle schools and large primary schools should mostly be trained graduates and elementary teachers should be matriculates; a programme for the expansion of training facilities for secondary school teachers should be drawn up and implemented. A system of correspondence courses should also be started with a view to clearing the backlog of untrained teachers and also to provide opportunities for further education; 1965: 3) intensive and well planned efforts on the requisite scale should be initiated to meet the shortage of teachers of English and science subjects.

A85 INDIA. STATE EDUCATION MINISTERS' CONFERENCE, 10TH, 1967. Teachers' status and education. (In its Proceedings. New Delhi, Ministry of Education, 1968. 27-30)

The following points regarding teacher education have been discussed by the ministers: 1) establishment of the State Boards of Teacher Education; 2) preparation of comprehensive State plans for the improvement of teacher education; 3) emphasis on in-service education of teachers; 4) development of programmes of part-time education in urban areas and of correspondence courses, especially to clear the backlog of untrained teachers at an early date; and 5) improvement of training institutions; in particular, improvement in the quality of teacher-educators through the establishment of Schools of Education in selected universities.

A86 **INDIA. UNIVERSITY EDUCATION COMMISSION (1948-49): Education (In its Report Vol. 1. Delhi, Manager of Publications, 1962. 210-17)**

It has been recommended that 1) the courses be remodelled and more time given to school practice and more weight given to practice in assessing the students' performances; 2) suitable schools be used for practical training; 3) students be encouraged to fall in with the current practice of a school and make the best of it; 4) the staff of the training college be recruited from people who have first hand experience of school teaching; 5) the courses on the theory of education be flexible and adaptable to local circumstances; 6) students be encouraged to proceed to the Masters' Degree only after some years of experience of teaching; 7) original work by professors and lecturers be planned on an all-India basis.

A87 **LEONARD P: Experimental plans for the education of an increased number of secondary school teachers for India. Journal of Education and Psychology 1969, 27(2), 138-40.**

It is suggested that the possibilities should be explored 1) to find a way to involve the teachers in service in the supervision of practice teaching and in assisting the training college in the training of teachers; 2) to enlarge the staff of the training colleges by utilizing teachers in service and thus relieving the training college staff for research, curriculum improvement, keeping abreast of their fields etc.; 3) to enlarge the number of students in training colleges without adding to the physical facilities and with a minimum of additional staff. If the intake of students in a given institution is doubled, it is suggested that half of the students may be placed in the training college and the other half in practice teaching schools. After one half of the school year the two groups could exchange positions. For this it is suggested that a group of secondary teachers should be trained to direct the student teaching in their respective schools.

A88 **LULLA B P: Reshaping curriculum in teacher education. Journal of Education and Psychology 1969, 27(2), 141-6. 5 ref.**

The following postulates are given for reshaping the curriculum: 1. The theory of teacher education should be in accordance with the purpose and function of education in India as derived from the national goals of democracy and planned development. 2. The trainees should be given the required job skills-personal and

social, professional, conceptional. 3. The course should impart general education as well as teaching competence. It is stressed that the curriculum should give equal weightage to all the skills for the total development of the teacher, instead of overemphasising professional skills. It is suggested that a national committee should be set up to formulate the fundamental objectives of teacher education and the varied responsibilities expected of trained teachers.

A89 MATHUR V S: Centres for teacher education. Educational India 1969, 36(3), 87-8.

The following two suggestions have been made for improving the teacher education programme: 1) laying down judiciously worked out criteria for granting affiliation to new training colleges and for allotment of new units to the existing colleges. Instead of having a number of training colleges in a small district or division, the resources could be pooled to form a single, large institution with better facilities to cater to the whole area; 2) formation of regional centres of teacher education by selecting one of the existing training colleges in every state or region and giving it a special character. These centres should cater to about one thousand students each and the staff should be of a higher level both in emoluments and in qualifications and experience. A national committee may be appointed to go into details of the above scheme so that at least some of the institutions may start functioning as regional centres of teacher education from the next academic year.

A90 MISRA R C: Selective admission in teacher education. Naya Shikshak (Teacher Today) 1969, 12(1), 9-22. 46 ref.

The importance of selective admission to training institutions is stressed. The 3 important considerations discussed are: 1. Qualities required in a teacher: a) general - physical fitness, good moral life, emotional stability, sociableness etc; b) specific knowledge of the subject, teaching ability, keeping oneself professionally up-to-date. 2. Academic qualifications. In this regard it is suggested that schools and colleges should be persuaded to maintain elaborate records of students' all-round achievement and such records used at the time of selection of teacher trainees. 3. Method of selection. A comprehensive test scheme similar to the one evolved by the Central Institute of Education, Delhi, should be formulated to assess the suitability of the candidates. The heads of the training institutions should also have powers to weed out unsuitable candidates. The following allied suggestions are made: 1) the school teachers should identify prospective candidates for teaching profession from among the students; 2) these students should be given opportunities to assist the teachers; 3) guidance programmes should be organised; 4) a long-term programme of teacher training should be evolved; 5) a state advisory committee should be set up to advise upon programmes of selection.

A91 MUJJU M L: Prāthamik aur mādhyamik śālayom ke adhyāpakom ke liye vignān mem viśeṣ taiyārī kī ek yojanā (= Special preparation in science, a scheme for primary and secondary school teachers) [Hindi] Naya Shikshak (Teacher Today) 1969, 12(1), 80-4.

In view of the paucity of science teachers, introduction of correspondence course in science (secondary school examination level) with provision for holding practical classes during vacation, for arts teachers has been urged. Time to be alloted for theoretical and practical classes; qualifications for admission; method of selection; manpower and financial requirements for the organisation of practical classes have been described.

A92 NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING. DEPARTMENT OF EDUCATIONAL ADMINISTRATION: Training course for principals of secondary teachers' colleges [held in] Taradevi (Simla) [from] 2nd to 16th June, 1965 . Delhi the Council, 1965. 143p.

The course was organized with a view to bringing together the heads/principals of secondary training colleges of Delhi, Panjab, Rajasthan and Uttar Pradesh, placing before them the main problems confronting the training of the secondary teachers of the region and providing a forum for finding out workable solutions for the problems. The following working papers have been discussed: 1. Training of secondary teachers in India - S.N. Mukerji. 2. Teachers we need for our secondary schools - S.N. Mukerji. 3. Trends in teacher education in the United States - R. Bell. 4. Analysis of the programmes for the professional preparation of secondary teachers - K.P. Surendranath and K.N. Hiriyanniah. 5. B.Ed. programme and new techniques of learning - P.D. Sharma. 6. Planning of a new teacher education institution - S.N. Mukerji. 7. Role and responsibilities of a secondary teachers' college - R.C. Sharma. 8. In-service education and training of teachers (primary and secondary) - W. . Griffin. 9. Teacher training in U.K. - S.L. Gupta. 10. Student teaching - G. Chaurasia. 11. Maintenance of accounts in a secondary teachers college - S M.S. Malkani. 12. Students in training colleges - P.K. Roy. The suggested recommendations are grouped under the following heads: 1) shortage of trained teachers; 2) B.Ed. programmes; 3) research; 4) new techniques of learning; 5) planning of a new teacher education institution; 6) roles and responsibilities of principals of secondary teachers colleges; 7) in-service education and training of teachers.

A93 NATIONAL SEMINAR ON THE EDUCATION OF PRIMARY TEACHERS IN INDIA. IST, DELHI, 3-10 OCTOBER, 1960. Report. Delhi, Manager of Publications. 1964, i, 263p.

Recommendations have been made on the following aspects: 1) targets to be reached at the end of the second and third Five-year Plans; 2) duration of the training course; 3) levels and types of training to be provided; 4) optimum size of a training institution; 5) recruitment of women teachers and provision for their training; 6) supervision of training institutions; 7) standardised expenditure returns; 8) grant-in-aid to private training institutions; 9) service conditions for primary teachers; 10) teachers' organizations; 11) selection of teachers and freshmen for admission to training institutions; 12) in-service training of primary teachers; 13) staffing of training institutions; 14) syllabus; 15) methods of teaching; 16) examinations; 17) organization of extension services; 18) development of a few selected training schools as experimental institutions; 19) wastage in training institutions.

A94 PALSANE M N: Educational psychology in teacher preparation - a point of view. Journal of Education and Psychology 1969, 27(2), 154-60. 7 ref.

It is suggested that the course in educational psychology should be problem-centred to make it more logical and meaningful. Educational psychology should enable the teacher to: 1) see the relation between the educational aims on the one hand and the nature of the educand; 2) get familiarise with the scientific methods and procedures needed in applying the psychological facts and principles to education; 3) appreciate the importance of the knowledge of individual educand's abilities and interests, knowledge of learning principles, social psychology of small groups etc., 4) get familiarise with various assessment procedures; 5) relate the knowledge of growth and development to learning tasks; 6) relate the curricular and cocurricular programmes to the individual needs of development; 7) understand his role in the process of character formation and development; 8) understand the problems of adjustment among pupils; 9) work out effective methods of study based on efficient methods of learning and inculcate them in pupils.

A95 SHAH M M: Aptitude test for secondary school teachers. Baroda, Maharaja Sayajirao University of Baroda, 1965. XI, 340p.

An aptitude test has been constructed so that it may be useful in selecting candidates for teaching profession. The test consists of the following 5 factors (sub-tests) as indicative of the aptitude for teaching: 1) aptitude towards children (35 items); 2) mental ability (26 items); 3) interest in profession (9 items); 4) adaptability (20 items); 5) professional information (30 items). Sound knowledge of the subject matter which is an important factor and other factors such as health, industry, and sincerity have been left out from the test items. A sample of 530 graduates and postgraduates had been given the test for construction and standardisation. The reliability and validity of the test were found to be satisfactory. The forecasting efficiency of the test battery is 16%. It is observed that candidates who score, on this aptitude test, 58 or below should be considered unacceptable to the profession. However, it is suggested that together with this test, information about the candidates' subject knowledge, health, their sincerity and industry should be collected through proper techniques and considered while selecting the candidates.

A96 SHARMA S K: Elementary teacher education in Rajasthan renovated - practical considerations in new syllabus. Teacher Education 1969, 3(3), 9-11.

Describes Rajasthan's endeavour to revise the syllabus of elementary teacher education in the State. A job-chart of a teacher in the state, a few case studies of the existing syllabus in the training institutions and the experiments carried out in a few elementary teacher training institutions regarding the major changes desired in the syllabus, the opinions and responses of the field workers in the State, formed the basis for the revision of the syllabus. A few assumptions on which the work was given the final shape are: 1) the teacher education programme should take the form of a continuous process at suitable intervals during the whole service period of a teacher; 2) the teacher training programme to be more realistic should reflect the field conditions; 3) the extension service programme should become an essential and integral pfeature in every training institution; 4) the knowledge of subject content is the material, and methods are the means; 5) the theory should evolve out of the needs of practical work in the classroom; 6) however ideal a scheme may be, its success depends solely upon its implementation; 7) no teacher training programme can be successful so long as it does not provide for proper motivation of the trainees to adopt teaching as their profession for life; 8) the training school should demonstrate the workability of the programme by organizing itself on the lines advocated as also through the life, habits, behaviour and approach of the members of the staff. The salient feature of the new syllabus and its structure have been given.

A97 SRIMALI P L: How to make our teacher-training programme effective. Journal of Education and Psychology 1969, 27(2), 188-91. 188-91.

The following suggestions are given: 1. The whole course should be formulated in accordance with clearly spelt out objectives. 2. To establish close relationship between theory and practice the following should be done: a) the theory papers should be reorganized according to the actual needs of the teachers and schools, b) each subject specialist should give at least 10 or 15 lessons and then build up his theory lectures on methodology on the foundation of what he has demonstrated. The trainee should also teach in actual school conditions and their lesson plans should reflect the modern developments in evaluation techniques and the actual time that ordinary teachers get for preparing their lessons. Each lesson plan should be first discussed with the lecturer concerned, then the entire lesson should be supervised and it should be discussed once again. Senior school teachers should assist as part-time lecturers in methodology of teaching. The students should give at least 60 supervised lessons and work for a fortnight as a regular teacher taking part in all aspects of the school work under the joint supervision of the headmaster concerned and one of the lecturers. 3. Reading assignments should be given to students and made a part of internal assessment to stimulate the reading interest. 4. The duration of the course should be extended so as to include instruction in subject contents. 5. There should be an integrated programme of training, research and extension. 6. The candidates for training should be judiciously selected. 7. Every training college should have an experimental school attached to it. 8. The training college must have a laboratory for guidance work and psychological experiments and a science laboratory.

A98 **TRIVEDI R S**: In-service programme for teacher educators. Journal of Education and Psychology 1969, 27(2), 185-7.

The need for a dynamic programme of in-service education for teacher educators is stressed. Inclusion of the following broad areas is suggested in such an in-service programme: 1) specific competencies required for an efficient teacher; 2) fundamentals in the psychological and sociological foundations of education; 3) practice teaching: a) aspects of teaching-learning process, b) teacher preparation, c) making practice teaching meaningful, d) evaluation. To make the pedagogical content more meaningful, the in-service programme may include activities such as workshops, seminar readings and discussions, brain-storming sessions, book reviews and topics pertaining to educational psychology and sociology, new experiments and approaches. Besides, discussion groups should be organized on some of the new ideas such as: evalua 1) innovations and change in teaching, organization and evaluation practices; 2) instructional material; 3) curriculum-changes and evaluation; 4) concept of learning; 5) concept of discipline and democratic practices in classroom teaching; 6) instruction and guidance in education; 7) parent-teacher conference; 8) educational measurement and testing.

A99 **UPASANI N K**: Changing objectives of teacher education in India. Journal of Education and Psychology 1969, 27(2), 115-18.

The need to atune the teacher education programmes to the special requirements of independent India is stressed. The folowing 5 guiding principles for teacher preparation are given: 1. The teacher must have a sound educational philosophy He must inculcate in the young loyalty to the principles of freedom, social justice, equality and benevolence. 2. He must have an adequate functional psychology to motivate children for productive purposes. 3. The teacher must have a dynamic sociology to enable him to perform a double role as educators among children and as community leaders. 4. Teacher education must create in teachers a desire to keep abreast of new developments. There should be provision for inservice education. 5. The teacher needs to be prepared for his role of promoting international understanding. The two major objectives of teacher education institutions are: a) preparation of young men and women for wholesome satisfying and productive life activities; b) preparation of teachers for instructional or supervisory assignments in schools.

A100 WORLD CONFEDERATION OF ORGANIZATIONS OF TEACHING PROFESSION: Professional preparation of elementary teachers (In its Status of teachers in India. New Delhi, Asia Office of the Confederation, 1967. 36-61).

State-wise information on the following aspects has been presented: 1) trained elementary teachers. By 1963-64, 66.3% of primary school teachers and 72% of middle school teachers were trained; 2) elementary teacher training institutions (1965). There were 1,499 institutions; 3) enrolment in training institutions (General) (1963-64). A total of 1,75,652 students were under training of whom 48,024 were women; 4) duration of the courses and minimum qualifications required: general teachers; 5) courses for special teachers; 6) levels of training; 7) selection procedures for admission to teacher training schools; 8) tuition fees and financial assistance (1965); 9) cost of training; 10) in-service education; 11) growth of teachers' training schools (1948-62, 1964) - while there were 720 training schools in 1950, in 1964 it is 1499 with an enrolment 1,27,628 men and 48,024 women. Some of the problems facing elementary teacher education and the needed improvements have been given: 1) it is necessary to determine the reasonable size for an institution, so that costs may be reduced and efficiency improved; 2) many of the institutions are located in urban or semi - urban areas, especially in the case of institutions for women teachers. An effort should be made to locate these institutions in rural areas; 3) there is dualism in the training of teachers with the conversion of several training schools to the basic type. An early decision should be taken in regard to the proper course of training for elementary teachers; 4) it might be desirable to provide separate courses of training for candidates with qualifications lower than matriculation; 5) there should be a certain uniformity in the duration of training course; 6) in many cases buildings are inadequate and unsuitable; 7) the syllabus should be made more balanced and effective; 8) there are wide variations in the practice-teaching, and supervision of school practice also needs considerable improvement.

A101 WORLD CONFEDERATION OF ORGANIZATIONS OF TEACHING PROFESSION: Professional preparation of secondary teachers. (In its Status of teachers in India. New Delhi, Asia Office of the Confederation, 1967. 62-81)

Secondary school teachers are, as a rule, trained in institutions of the post-graduate standard. Only graduates are eligible for admission to these institutions. Training for teachers of art, music, crafts, etc. is provided along with the teachers of vocational, technical and special schools in special training colleges. State-wise information on the following aspects has been given: 1) types of postgraduate teacher education institutions-for men only, for women only and co-educational-the total number is 275, 217 being co-educational, 39 for women only and 19 for men only; 2) types of institutions offering post-graduate teacher education courses; 3) types of post-graduate teacher education institutions according to managements-11.2% of institutions are managed by universities, 30.2% by the State Governments and 58.6% by private or autonomous bodies; 4) number of students in teacher training institutions (general) (1964); 5) teacher requirements for secondary education during the Fourth Plan period, 1966-71; 6) courses in teachers' training (for graduates); 7) number of universities with percentage providing various subject areas under the compulsory group for the B.Ed. and equivalent programmes; 8) selection procedures for admission to training colleges; 9) stipends and financial assistance; 10) cost of training; 11) in-service education. Some of the problems of teacher training for secondary schools as identified by a committee appointed by the Government of India, are: 1) forty nine percent of the colleges did not have sufficient strength equal to their admission capacity. Small colleges are inefficient and costly; 2) only 15% of the colleges providing basic training have proper workshops or craft sheds; 3) colleges attached to high schools or arts and science colleges cannot provide the necessary professional atmosphere for efficient training; 4) the candidates undertaking post-graduate training and research do not have adequate grasp of the subject. There is great variation in the standard of admission, curriculum and type of research work required of students.